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COUNTRY GENTLEMAN.

A MAGAZINE OF GARDENING, FLOWERS AND DOMESTIC ECONOMY, WITH AN
NATURAL HISTORY.

DIRECTED BY

GEORGE W. JOHNSON, F.R.H.S., AND ROBERT EGGS, LL.D.

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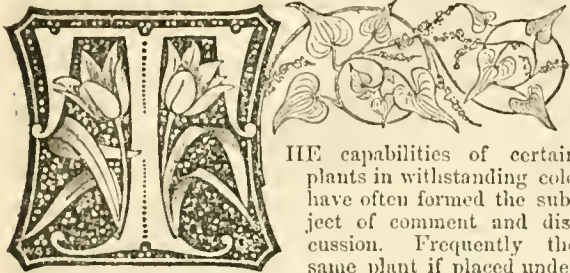
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WEEKLY CALENDAR.

Day of Month.	Day of Week.	JULY 4—10, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.	Days.	m. s.	
4	TH	Birmingham Rose Show opens.	76.1	53.4	64.2	13	51 af 3	17 af 8	14 af 7	49 af 9	8	4 1	185
5	F	Louth Horticultural Show opens.	77.5	50.8	64.1	16	51 3	17 8	32 8	21 10	4	4 12	186
6	S	Royal Horticultural Society Show and	76.4	51.4	63.9	18	52 9	16 8	46 9	50 10	5	4 22	187
7	SUN	3 SUNDAY AFTER TRINITY. (Promenade.)	73.7	51.1	62.4	21	53 3	16 8	57 10	16 11	6	4 32	188
8	M		73.9	49.8	61.8	19	54 3	15 8	after.	42 11	5	4 42	189
9	TU	West of England Rose Show, and Leices-	73.8	49.6	61.7	18	55 3	14 8	13 1	morn.	8	4 51	190
10	W	ter Horticultural Show.	74.4	50.4	62.1	16	56 3	14 8	13 2	8 0	9	5 0	191

From observations taken near London during the last forty years, the average day temperature of the week is 75.1°; and its night temperature 50.5°. The greatest heat was 97°, on the 5th, 1852; and the lowest cold 33°, on the 9th, 1863. The greatest fall of rain was 0.82 inch.

THE COLD PIT, AND ITS USES IN WINTER.



THE capabilities of certain plants in withstanding cold have often formed the subject of comment and discussion. Frequently the same plant if placed under

different circumstances will afford conflicting results, and there are several causes which render a plant more liable to injury from cold at one time than at another. Even the latitudes in which a plant grows naturally are by no means a true index of its hardiness; thus the Furze of our commons, which one would suppose capable of braving the utmost rigours of our climate, suffers in severe winters, while many trees and shrubs from countries much warmer than Great Britain withstand uninjured an equally low temperature. Extremes of cold, however, bring in their train certain loss, many plants being either killed or so much injured as to require one or more seasons' growth to restore them to their former condition; but such extremes are not without their utility, inasmuch as they prove the hardiness of recently-introduced plants; thus the past winter has established that of the *Thuja* and *Retinosporas* from Northern China and Japan. My purpose, however, at present is not to discuss the hardiness of plants such as these, but to offer a few notes on some of humbler growth, and which require slight protection during most winters, though very often treated to more warmth than is required merely to maintain their existence. The plants to which I shall refer are often wanted in quantity for the flower garden, and are capable of withstanding a considerable amount of cold and damp without the least assistance from fire heat, and with no extraordinary covering, being such as may be carried through the winter in a cold pit. Many good designs for such pits have already appeared in the pages of this Journal. I will describe two pits which exist at this place, and are of very cheap construction.

In the middle of an open kitchen garden, and fully exposed to the south, are two cold pits on a line with each other; they are both 110 feet long by 6 feet wide inside, and are divided into compartments varying in length from 12 to 30 feet. The outer walls are of 4½-inch brickwork, strengthened at places by brick piers at the back, which is about 15 inches higher than the front; and a timber wall-plate, cut to suit the incline from front to back, is placed above the brickwork. There are no rafters, but one or two tie-pieces from back to front where the space between the division is too great. Of course all the partitions are capped with a similar timber-tie, but, as will be seen, there is really very little carpenter's work in the whole, and the brickwork is of the plainest kind. I have a partiality for brick in preference to turf pits, as being more durable, and

looking neater; and in the case of those which I am describing, owing to there being a walk in front, a uniform line was desirable. The expense of the bricks was not a serious affair, the workmanship of the timber wall-plate was very simple, and the construction admits of almost any description of covering, such as thatched hurdles, old lights, or wooden shutters; but, of course, where glazed lights can be afforded they are best. Those who might prefer a canvas or felt covering might easily avail themselves of it; but glazed lights, or wooden shutters made of three-quarter-inch boards, and somewhat like doors, are our principal coverings. I ought to mention that the back of the pits is a little more than 2 feet high, the front 15 inches high inside, and about 6 inches less on the outside, the bottom being sunk that depth below the level of the ground; but when small plants are grown, one-half the depth of the pit is often filled up. Frequently when one of the compartments has been used for a slight hotbed, of which the materials had been raised quite to the top, some months afterwards when they have settled down, a cutting-bed is formed to stand the winter.

I will now offer some remarks on the subjects which may find a place in the cold pit.

CALECOLARIA.—All the bedding kinds do remarkably well; indeed, for many years I have not grown them anywhere else in winter. Cuttings put in at the end of October, or sometimes as late as the end of November, rarely fail. I usually have the cuttings inserted in rows about 3 inches apart, and about 2 inches from each other in the row. Thus a large number of plants may be reared in a very small space. Towards the middle or end of March, or, it may be, the beginning of April, the young plants in every alternate row are carefully transplanted in some warm corner where they can have a few boughs thrown over them, or some other slight covering in cold weather. The rows left are now 6 inches apart, and the plants are usually ready for removal to their summer quarters by the 1st of May. I have sometimes planted *Calceolarias* out before that time, but there is no great advantage in doing so, and when they form a portion of a ribbon-border or of large beds where more tender plants are used, they cannot well be planted before the others. The soil used for striking the cuttings is made rather open by a liberal application of sand. Very severe winters sometimes injuriously affect such kinds as *Calceolaria amplexicaulis* and those partaking of the semi-herbaceous character, but by giving them a corner next a partition, and adding some covering over them when the frost is very severe, enough for all purposes generally escape; and although during the past winter protection in addition to the ordinary glass lights was only given on one or two nights, a fair proportion of the plants have been saved, while of such as *Aurea floribunda* the loss has not exceeded one per cent.

GAZANIA SPLENDENS.—Cuttings of this ought to be put in some time before those of the *Calceolaria*; but the end of September will do, and in a breadth of these put in at that time I find every cutting has made a plant, and they were in good order for removing by the 1st of May.

CENTAUREA GYMNOCARPA.—Like the *Gazania*, cuttings of

this ought to be put in by the end of September, and although they are not so sure to succeed as the *Calceolaria*, the majority will strike; they cannot, however, well be removed before the middle of May, as they are rather slow in making roots, although the top shows signs of growth beyond what might be expected from the extent of the roots formed. This species is very apt to run to flower, and nipping off the tops hardly prevents the plant flowering, after which it often dies off. The same objection does not apply to *Centaurea candidissima*, but as *C. gymnocarpa* grows more freely, and furnishes at least ten cuttings for one of the other, it is more conveniently propagated. Cuttings in spring also strike.

NIEBERBERGIA GRACILIS is not half so much grown as it ought to be, as plants furnish a greater amount of bloom, and continue longer in that condition; its only drawback seems to be its inability to withstand rain. It is nearly hardy, and if cuttings of it could be put in early in the autumn they would stand very well; but it is too late to put them in at the same time as the *Calceolarias*. A few old plants, however, pulled in pieces with a root to each, will often do. I find the past winter has left fewer than usual. I do not attribute this to the delicacy of the plant, but to the lateness of the period at which the cuttings were put in.

VERONICAS of the New Zealand class strike well at all seasons, I believe, and cuttings put in towards the end of September make excellent plants to remove in spring. These plants are by no means hardy, although they will live against walls or in sheltered places during mild winters. They are easily propagated as described, and make fine plants to turn out in spring.

SALVIA ARGENTEA.—The thick blanket-looking foliage of this entitles it to a place amongst plants having remarkable foliage. Rooted suckers or side shoots have survived with the same treatment as the *Calceolaria*. It cannot be so readily increased by cuttings as by seeds.

SANTOLINA INCANA, or Lavender Cotton. Treated something in the manner of Box-edging, this plant is very serviceable as a boundary to a shrubby border. Its grey hue and neat compact appearance entitle it to more attention than it often receives. Cuttings inserted at the end of September make good plants to remove in the beginning of May; almost every cutting will grow. They may also be put in more closely together than most cuttings, as the plant requires but little space laterally.

CINERARIA MARITIMA.—Cuttings put in at the same time as the *Santolina* mostly succeed, though not so generally. The little trouble which they give when in a cold frame, and the good plants which they become when they do succeed, make it well worth while trying them in this way. Fully one-half of the cuttings become plants, and perhaps more than this would strike if greater care were taken in selecting them. The small shoots springing from the centre or collar of the plant are to be preferred to the woolly tips. I often put in a few rows as a division between the *Calceolarias*.

LINUM FLAVUM.—This useful little plant is nearly hardy, nevertheless severe winters take an effect upon it, and I find many of the old plants have been destroyed by the frost of last January. Cuttings may be put in as late as September, but it is better to have them earlier, as they form better plants; the protection of a cold pit is all that is required for them, and such a place is probably better for them than warmer quarters.

PYRETHRUMS.—Cuttings of these seem to strike at all times, and if put in at the same time as those of the *Calceolaria*, and treated like them, form excellent plants by April, when they may be put into their proper quarters. *Pyrethrums* continue longer in flower than most herbaceous plants; but it is difficult to secure a continuation of bloom. A number of cuttings in spring, to succeed those struck in autumn, will afford a succession; and beds formed partly of autumn and partly of spring-struck plants continue longer in bloom than when planted with either alone. Cutting down some of the plants is not so satisfactory as having two lots to begin with.

ARABIS VARIEGATA.—Cuttings strike in the open ground at any season, so that I rarely give them a glass covering; but if there should be space in a cold pit they will, if put in very late in autumn, form good plants in spring. The more showy *Arabis lucida variegata* is less free of growth, and would seem to be most at home where the *Rhododendron* and similar plants thrive. We cannot make much of it here.

EBONYMUS JAPONICUS VARIEGATUS.—The gold-blotched variety from Japan strikes tolerably well if cuttings are put in at the

same time as *Calceolarias*; but I find that it does not make such rapid progress out of doors as under glass. The silver-edged *E. radicans variegatus* is certainly better grown out of doors at all times.

VERBENAS.—I have tried them in a cold pit at various times for nearly twenty years, but the success of the system has never been such as to recommend its general adoption. Usually the pit is occupied by something else at the time the cuttings should be planted, and they seldom do well late in the autumn. *Verbena pulchella* and *Verbena venosa* do better than the others. *Venosa*, owing to its rambling habit, is unfitted for pot culture. A few plants taken up in autumn keep well in a cold pit.

PENTSTEMONS.—Cuttings of these do very well late in the season, and form bushy little plants by the middle of April. I usually put in a quantity of them, and they come in very handy, as old plants become large and unsightly, and do not bear cutting down very well.

LOBELIA.—The dwarf *Lobelia erinus* varieties sometimes do well and sometimes not. Last year we were unfortunate with them, as few survived the winter; but I by no means attribute the failure to the cold alone, they are apt to die off at times; and although we usually take up old plants and after cutting them in tear them to pieces, preserving some roots with each, plants so treated do not always survive even in a warm greenhouse, though every slip be well rooted. Sometimes they do well in a cold pit, and when they do succeed they make nice bushy plants.

SEDUM SIEBOLDII is all but hardy. Cuttings seem to strike freely at all seasons, and the cold pit is just the place for it.

HYDRANGEAS also strike well from cuttings taken off at all seasons, and when these or other plants can be propagated with little trouble it is certainly better than when much attention is required. Cuttings do very well in the autumn.

VIOLA CORNUTA.—The cold pit is just the place for this lovely plant. A quantity of cuttings put in during the autumn of 1865 formed very good plants by the following April, and were planted out and did well that season.

Besides the above there are many herbaceous plants which do very well in a cold pit—for instance, the taller *Lobelias*, some *Coronillas*, several of the *Sedums*, *Iberis sempervirens*, *Alyssum saxatile*, the ornamental Grasses, as *Stipa pennata*, *Dactylis glomerata*, and others, as well as the more robust plants which occasionally want some protection in severe winters, as the *Cannas*, which suffer from too much damp, as well as from the frost. I also find the slugs are very destructive to *Cannas*; but by covering the crowns with ashes and the stems with dry leaves, they may be carried through the winter, as they were here last winter, in the places where they have been growing.

I will not attempt to enumerate all the plants to which such a pit as that which I have described could afford shelter, as most plants that will endure 3° or 4° of frost may be wintered there if they are not liable to suffer from damp. Bedding *Pelargoniums*, however, rarely do well, fire heat being wanted for them.

Although I have confined my remarks to ornamental plants, yet such a pit as I have described is quite as useful for many other purposes which the requirements of the time or place will suggest. Ridge Cucumbers and sometimes *Capsicums* may be grown in it, and immediately after the *Calceolarias* have been removed Celery may be pricked out in some of the compartments. Indeed, the cold pit with me is rarely empty.—J. ROBSON.

POA TRIVIALIS ARGENTEA ELEGANS.

From my experience of this Grass, so recently introduced into public notice, it is to be feared that, like many other plants that are strongly recommended for parterre decoration, it has not been fairly tested before a character has been attached to it. I planted out nearly two hundred plants of it here this season, and when planted out I never saw anything of the sort that pleased me so much, it was so beautiful and so graceful in habit; but it soon showed signs of losing its variegation, not in certain instances, but in all the plants, and it continued to do so till nearly every vestige of variegation had disappeared from the whole of the plants, and, consequently, it had to be replaced by another plant.

I may remark that the *Dactylis glomerata variegata* retains its variegation constantly in this soil, and is one of the very best and least troublesome variegated plants for decorative purposes that I have seen. Under glass in pots the *Poa* is a

very elegant plant, but if it behaves generally as it has done here, when planted out, it will be of little or no use for outdoor decoration.—D. Thomson, *Archerfield*.

OKEFORD FITZPAINE.

WHEN my worthy friend Mr. Radclyffe claimed to be a rosarian, and not merely a Rose-grower, he made a distinction which to some appeared not very plain, but which a visit to his home and half an hour's conversation with him would soon make manifest to be thoroughly well founded. There are many persons who grow the Rose, but those who understand it are comparatively few. Some grow it simply as an exhibition plant; they would not go to half the expense or trouble that they do were it not that they intend to enter the lists for competition. Some grow it because they love flowers in general, and they would not consider their garden well furnished without, if not a rosery, at any rate some Roses. Others grow them because the Rose is a fashionable flower, and not to know something about a fashionable flower would indeed seem to be out of the world of horticulture. But for none of these reasons does my good friend grow his Roses. He has exhibited in days past, but his exhibition days are over. He does not care, I believe, in the least for any other flower, and he is perfectly indifferent to what fashion wills or wills not; but he loves the Rose because—because it is the Rose, the flower *par excellence*. "It is his first, his last, his only love," in winter and in summer. When keen biting frost, and heavy snow, and blasting winds are wounding his pets, or in summer when they reward his care by their clustering blooms, he is alike interested in them. I have heard of a Lancashire weaver taking the blanket off his bed at night to cover over his frames of Auriculas. I believe blankets, and quilt, and all would go out into the garden if the dear Roses at Okeford needed it. And this character of a rosarian may be, as I have said, justly claimed by Mr. Radclyffe, for his Roses are, considering all that they have gone through, wonderful. He had to leave Rushton early last year, and his Roses were consequently deprived of his paternal and maternal care; and yellow rust, black mildew, and aphids were allowed to do pretty well as they liked so far as he was concerned, though I believe "Steevie" had his eye on them. They were all moved between the 24th of August and the 10th of September to their present quarters, into a soil which, while far better than Rushton, is not a good Rose soil. It rests on the greensand, and is what we call in our neighbourhood "clity"—i. e., stiff and hungry-looking, not like the rich, beautiful, loamy soils of Hertfordshire. He cut them back, trusting to the vigour of his stock that they would push their way. We know, and many, alas! to their cost know, what a winter we have had. What wonder, then, that, exposed as he is, his Roses should have been cut down, and in the great majority of cases to the snow line? Had he not been a rosarian half of them must have gone; but he mulched them well, and then regularly banked them up, so leaving the wet a fair opportunity to run off; but when I saw his beautiful yellow Roses cut down to the very boll, I must own I felt disposed to doubt whether even his care could restore them; and even after I had been there in April came that severe May frost, which did as much if not more injury than that in January. When I say that, notwithstanding all this, I have nowhere seen more luxuriant growth, or finer and cleaner foliage, I could not for a moment hesitate to give my friend the character of being the first rosarian that I know. One of his Triomphe de Rennes Roses in the front of the house has made shoots 6 feet long. His plants of Gloire de Dijon are equally vigorous; his Celine Forestiere budding all over; and out of his twelve hundred Roses, for this is the extent of his stock, he had not a score of losses, while his wounded are now convalescent. Had it not been such a winter, his Roses would now have reached the top of the poles, and if they grow as they are growing now they will still do so ere long. What I particularly admired was, that when the first head of bloom was over, immediately below it strong vigorous shoots had been made, and you could already feel the young buds that would make the second bloom, and this he assured me would be succeeded by a third. Mr. Radclyffe is no friend to novelties; he waits to see what they are before they are added to his list, and then he adds freely; but he says, "While I have such Roses as Charles Lefebvre, Madame Victor Verrier, Lord Maccanly, John Hopper, Jules Margottin, Madame Videt, and Comtesse de Chabillant, I feel it is no easy matter to beat them, and I had rather multiply these than order a lot of things

which I should have afterwards to throw away." Hence you find these in large abundance in his garden, along with General Washington (which was better and showing less of the green eye than I have ever seen it), Caroline de Sansal, Prince Camille de Rohan, Sénateur Vaisso, Madame de Cambacères, Pierre Notting, &c. The only novelties he had were those of Mr. Wm. Paul's raising, and of these he is disposed to think well of Lady Suffield and Dr. Lindley, the latter especially. Some of the individual flowers that were measured, such as Jules Margottin, were from 4 to 4½ inches across, and models of form, and this without any disbudding, but all plain, fair sailing. Marguerite de St. Amand is another favourite, and beautiful it looked, while John Hopper was everywhere splendid; but the pet of the garden is, I think, Charles Lefebvre, and, be it remembered, all are on the Manetti stock, by which he stands under all circumstances. Some one has said that Acidalie is delicate. Why, he had plants fifteen years old perfect bushes on the Manetti, and so with all the rest.

We all know that Mr. Radclyffe is an authority on Strawberries (M. De Jonghe, of Brussels, putting him at the head of the list), and hence one might expect to find them in perfection at Okeford. They seem magnificent in foliage, and the produce astonishing, but very late. The first bloom was cut off by the May frost, and hence their backwardness, Rivers's Eliza being the only one really in full bearing. Besides this, he has fine beds of Wonderful, Dr. Hogg, Cockseomb, and Mr. Radclyffe—the last new seedling of Mr. Ingram's. The three last are evidently of the British Queen race, combining, however, great vigour with the delicious flavour of that fine Strawberry. He has had a great deal of difficulty with his wall, a large portion having fallen; but withal that, I saw what I have never seen before—fruit on maiden trees of the Noblesse and Royal George Peaches.

With that generous kindness towards others, which has always characterised my friend, he willingly allows any of his neighbours to come in and see the Roses. The other day "the Club" were permitted to perambulate it, and I think he was more complimented by the remarks of one of its members than he would be by that of the most accomplished Rose-grower. "Why, sir! my missus thought more of them Roses than she did of all the club." So many are availing themselves of his kindness, although in an out-of-the-way place, that he says now, "I must keep a showman." But this excellence is not arrived at, as I have already tried to show, without considerable labour and trouble. He is up early every morning watering, and all day long he is overhauling something in his garden, and giving that personal superintendence to everything which is of such value. In this, indeed, he is ably seconded by "Steevie," who is well nigh as enthusiastic as his master, and they may well be satisfied with the result of their united efforts. I know many places where there are large collections of Roses; I know many where there is a greater number of varieties grown; I know many where you might find finer individual flowers; but I know no place where the Rose is more lovingly cultivated than at Okeford, and I certainly know no one who has a greater claim to be considered an out-and-out rosarian than my worthy and kind-hearted friend, Mr. Radclyffe. May he and his Roses alike flourish.—D., *Deal*.

A PLEA FOR CACTI, AND HOW TO GROW THEM.

CAN you tell me the best mode of effecting exchanges of young plants of the more beautiful or sweet-scented of the Echinopsis, Echinocactus, and allied species? I have been very successful in growing them, and it has often been a matter of astonishment to me, that our English gardeners, as a rule, so completely ignore a class of plants that are so easily grown, and the flowers of which, whilst compensating for their short duration by their profusion, have amongst them some that are unsurpassed, either in beauty of colour or fragrance, by any flowers grown. The Rose may well be called the queen of flowers, but any one who has seen the Night-blooming Cereus in all its glory, will, I am sure, allow it to deserve the name of empress of the floral world.

I have grown these plants for many years, and as each succeeding season develops new beauties and good points in my favourites, it has given rise to this short article, and my question, How to dispose of the host of surplus stock that I am obliged to take off from my specimen plants, and which I have not the heart to throw away?

The ease with which Cacti can be grown, and well grown, is marvellous. They require a tolerably dry atmosphere, exclusion of frost, very little water—only just sufficient to keep them from shrivelling in winter, and, as soon as early summer is at hand, the fullest exposure possible under hand-lights to the hottest sun. Keep the pots plunged in cocoa fibre or sawdust, and syringing copiously several times a-day, so as to keep up a moist heat at 80° or 90°. About September growth will have ceased, when water, &c., must be diminished, and air given. This is all that is required to cause a plant of *Echinopsis Zuccarini* in a 48-pot to develop six or eight flowers, one of which will scent a large conservatory.

I have now the Night-blooming *Cereus* with several flowers about to expand; and to prove the tenacity of life in this tribe, I may mention that the cutting from which this plant was raised laid dormant on a shelf in the greenhouse for more than twelve months, and then suddenly vegetated. A second example has just occurred with me, which I think worthy of

note. A tall *Cereus hexagonus* that for the last three years has flowered well, has now outgrown my house, having attained a height of 10 feet. I have cut off the top 6 feet long, and having suspended it in the hothouse three weeks ago, with a tuft of loose, damp moss around the cut portion, it has thrown out fine roots, and is ready to begin life "anew," but as an old flowering plant. The cutting weighs about 25 lbs. The root portion of the stem, about 4 feet long, will make a fine stock for grafting.

Another curious fact has just come to my notice—namely, that a plant of the Prickly Pear last year produced fruit which did not ripen, and one of these unripe fruit had thrown out a perfect flower and fruit from its side near the apex.

If you can spare room to insert these hasty lines, it may induce some amateurs to undertake the culture of this beautiful section of plants, and I am confident that none will be disappointed. I shall be most happy to afford any assistance in my power.—C. M. MAJOR, *Cromwell House, Croydon.*

DESCRIPTIVE LIST OF HERBACEOUS PLANTS.

THE plants named in the following list are those which, from my own observations and experience, appear to be the most pretty, showy, curious, or interesting of hardy herbaceous perennials for gardens; but, doubtless, many more could be added.

Those marked with an asterisk (*) are the most deserving of cultivation where only a limited number can be grown; *e* indicates those which are very showy, useful, or desirable; *c*, such as are in some way remarkable, having showy flowers; and *r*, those but little known.

	MONTHS OF FLOWERING.	HEIGHT IN FEET.	COLOR OF FLOWER.	SOIL.	PROPAGATION.
<i>Achillea aurea</i>	June to September	1½	yellow	loam	division
* <i>A. millefolium rubra</i>	July to October	2-2½	red	loam	division
<i>Adenophora denticulata</i> <i>c</i>	July	1-1½	blue	loam, peat, and sand	division
* <i>Adonis vernalis</i>	March and April	1-1½	yellow	loam, and limestone	division
* <i>Agrostemma coronaria</i>	June to September	1½-2	rosy crimson	loam and gravel	seed
* <i>A. coronaria splendens</i>	June to September	2	deep crimson centro	loam	cuttings
* <i>A. coronaria bicolor</i>	June to September	2	white, rose	loam	cuttings
* <i>A. purpurea plena</i>	July to September	2-2½	double crimson	loam	cuttings
* <i>Ajuga alpina</i> <i>c</i>	May to July	4-1	deep blue	sandy loam	division
<i>A. reptans variegata</i>	May to July	4	variegated foliage	peat and loam	division
<i>Adoxa moschatellina</i> <i>c</i>	March to May	2-2½	greenish yellow	loam and sandy peat	division
* <i>Alstromeria aurantiaca</i>	July to September	2-2½	orange	sandy peat and loam	division
* <i>Alyssum saxatile</i>	April and May	3-1	yellow	loam and limestone	seed and division
* <i>A. saxatile compactum</i> <i>c</i>	April and May	2-3	yellow	loam	seed
* <i>Anemone hepatica</i>	March to May	1-1½	blue	sandy loam	division
* <i>A. coronaria</i>	April to June	1-1½	various	rich light loam	seed and division
* <i>A. hortensis</i>	April and May	1-1½	various	rich light loam	seed
* <i>A. hortensis fulgens</i> <i>c</i>	April to June	1	scarlet	..	seed and division
* <i>A. japonica</i>	September & October	2-2½	rosy purple	loam	division
* <i>A. japonica Honorine Jobert</i> <i>c</i>	September & October	2-2½	white	loam	division
* <i>A. unciniflora</i>	May and June	1-1½	white and yellow	loam	division
<i>A. pulsatilla</i>	April and May	1-1½	violet	calcareous loam	division
<i>A. palmata</i> <i>r</i>	May and June	1-1½	yellow	sand peat and loam	division
<i>A. nemorosa plena</i>	March to May	1-1½	white	loam and leaf mould	division
<i>A. nemorosa rubra plena</i>	March to May	1-1½	reddish	loam and leaf mould	division
<i>A. sulphurea</i> <i>c</i> <i>r</i>	April and May	1-1½	sulphur or lemon	sandy peat	division
<i>Anchusa paniculata</i>	June	2½-3	deep blue	sandy peat	cuttings
<i>Antennaria margaritacea</i>	July to September	1½	white and yellow	sandy loam	division
<i>A. hyperborea</i> <i>c</i>	July	1½	leaves silvery white	sandy loam and peat	division
<i>Antirrhinum lilasistrum</i>	May, July	1½	white	loam	division
* <i>Antirrhinum majus</i>	June to August	2	various	sandy loam	seeds and cuttings
* <i>Aquilegia glandulosa</i> <i>c</i>	May to July	1½-2	blue and white	sandy loam	division
<i>A. Skinneri</i>	May and June	1½-2	scarlet and green	sandy loam	seed and division
* <i>A. vulgaris</i> , var.	May and June	2-2½	various	sandy loam	seed
<i>A. formosa</i> <i>c</i>	May to July	1½-2	red and orange	sandy peat	division
* <i>Arabis abida</i>	April and May	1	white	gritty loam	seed and division
* <i>A. lucida variegata</i> <i>c</i>	April and May	1	golden variegation	sandy loam	division
<i>Arnica montana</i> <i>r</i>	July and August	1½	orange yellow	loam and grit	division
* <i>Asclepias tuberosa</i> <i>c</i>	July to September	2-2½	orange	loam	division
<i>A. amœna</i>	July and August	2½-3	purple	peat and sandy loam	division
<i>Asperula odorata</i>	May and June	1-1½	white	sandy loam	division
<i>A. montana</i>	June and July	1-1½	pink	sandy loam	division
<i>A. cynanchica</i>	July	1	flesh	calcareous loam	division
* <i>Aster alpinus</i> <i>c</i>	June to August	3-1	lilac purple	loam	division
* <i>A. alpinus albus</i>	July and August	1	white	gritty loam	division
<i>A. amellus</i>	August & September	2-2½	purple	gritty loam	division
<i>A. dumosus</i>	September & October	3	white	loam	division
* <i>A. grandiflorus</i> <i>c</i>	October & November	2	blue	loam	division
* <i>A. novæ-angliæ ruber</i>	September & October	5	red	loam	division
<i>A. tenuifolius</i>	September & October	3	white	loam	division
<i>Astragalus aristatus</i>	May to July	1	purple	rich loam and grit	seed and cuttings
<i>A. alpestris</i>	June and July	2	lilac and yellow	sandy loam	seed
<i>Aubrietia dalt. ideoa</i>	April to June	1	purple	light loam	division
* <i>A. deltoidea grandiflora</i> <i>c</i>	April to June	1-1½	bluish lilac	light loam	division
* <i>A. Campbelli</i> <i>c</i>	April to June	1-1½	violet purple	light loam	division
* <i>Betonica grandiflora</i> <i>c</i>	June and July	1½-2	purple	rich loam	division
<i>Baptisia australis</i>	June and July	2½-3	blue	rich loam	division
* <i>Bellis perennis</i> var.	March to August	1	various	rich loam	seed and division
* <i>B. perennis ancubifolia</i> <i>c</i>	March to August	1	red and gold netted fol.	rich loam	division
<i>Campanula aggregata</i> <i>c</i>	June to August	1½	blue	sandy loam	cuttings and division
<i>C. carpatia</i> <i>c</i>	June to August	1-1½	blue	peat and sandy loam	division
<i>C. carpatia alba</i>	June to August	1-1½	white	..	..
<i>C. pulla</i>	June and July	1-1½	blue	loam	division
<i>C. macrantha</i>	June and July	1-1½	purple	loam	division
* <i>C. speciosa</i> <i>c</i>	May to July	2-2½	purple	loam	division
<i>C. persicifolia major</i>	July to September	3	blue	loam	division
<i>C. persicifolia albo plena</i>	July to September	3	white	loam	division
* <i>C. pyramidalis</i> <i>c</i>	July	4	blue	rich loam	seed
<i>Catananche cœrulea</i>	July to October	3	blue	loam	division

	MONTHS OF FLOWERING.	HEIGHT IN FEET.	COLOUR OF FLOWER.	SOIL.	PROPAGATION
*Ciborium intybus.....	June to August	4	blue	sandy loam	seed
Centauria montana.....	June to August	1½-2	blue	sandy loam	division
*Cerastium tomentosum.....	May to July	1	white	light loam	cuttings and division
*Cheiranthus Cheiri vars.....	March to June	1½-2	various	light loam	seeds and cuttings
*C. Marshalli.....	March to June	1	yellow	light loam	cuttings
*C. obovatum.....	March to June	1	pale yellow	light loam	cuttings
Chelone glabra.....	July to September	3-4	white	peat and loam	division
C. barbata.....	June to September	3	orange scarlet	turfy loam	division
C. Lyoni.....	July to September	4	purple	turfy loam	division
*Convallaria majalis.....	May and June	1 1½	white	rich loam	division
*C. majalis, gold striped.....	..	1½-2	gold striped foliage	..	..
*C. majalis, pink.....	..	1-1½	pink	..	..
*C. majalis, double.....	..	..	white	..	..
*C. multiflora.....	June	2	white	sandy loam	..
*C. polygonatum.....	..	..	..	..	..
*C. rosea.....	June	1½	rose	sandy loam	..
Clematis erecta.....	June to August	2½	white	peat and loam	division
*C. integrifolia.....	June to August	1½-2	blue	sandy peat and loam	division
Cynoglossum sphegnum.....	May to July	4	blue	sandy loam	seed
Delibarda mitellodora.....	May and June	½	white and yellow	loam and peat	division
*Delphinium Belladonna.....	June and July	2	bright blue	loam	seed and division
D. grandiflorum.....	June to August	3	dark blue	loam	division
D. grandiflorum, double.....	..	..	..	..	..
*D. formosum.....	June to September	2½-3	blue and white	..	seed and division
*D. Hendersoni.....	June and July	3	blue and white	..	division
Dianthus crenatus.....	June to August	1½	scarlet	loam	cuttings
D. atromentosa.....	June to August	1	red	loam	cuttings
D. deltoides.....	June to August	3	pink	loam	cuttings
*D. barbatus, vars.....	June to August	1-1½	various	rich loam	seed and cuttings
D. fragrans.....	June	1-1½	white	sandy loam	cuttings
D. plumarius annulatus.....	June to August	3	pink, dark ring	light loam	cuttings
*D. superbus.....	July to September	1-1½	pale purple	loam	..
Dietamnus Fraxinella.....	May to July	2½-3	purple	loam	seed
D. albus.....	May to July	2½-3	white	loam	seed
Doronicum eucrasium.....	June to August	1½	yellow	sandy loam	division
D. plantaginifolium.....	May to July	2	yellow	loam	division
*D. spectabile.....	April and June	2-3	rose and yellow	rich loam	cuttings and division
*D. spectabile alba.....	April and June	2	white	rich loam	cuttings and division
Dodecatheon meadia.....	April to June	1	blue and purple	peat and grit	division
D. integrifolium.....	April and June	2-3	blue and purple	peat and grit	division
Dracopis grandiflorum.....	July	1½	blue	turfy loam	division
Epilobium angustifolium.....	July and August	4	purplish red	loam	division
*E. angustifolium album.....	July and August	4	white	loam	division
*E. Dodonai.....	July and August	4	purple	peat and grit	division
Ephedra macraetum.....	April and May	1½	white	peat, loam, and grit	division
E. violaceum.....	May	3-4	violet	peat, loam, and grit	division
Eremurus spectabilis.....	June	2	yellow	sandy loam	division
Eryngium alpinum.....	July and August	2	blue	loam and sand	division
*Eryngium grande.....	..	1½	gold blotched foliage	loam	division
Funkia subcordata.....	August	1½	white	peat and loam	division
F. ovata.....	May to July	1½	blue	peaty loam	division
*Festuca elatior.....	June	1½	blue or glaucous fol.	loam	division
Galium graecum.....	June and July	4	purple	gravelly or sandy loam	division
Geuista procumbens.....	June and August	1½	yellow	sandy loam and peat	layers
G. prostrata.....	May and June	1	yellow	sandy peat and loam	layers
*G. triquetra.....	June and July	1	yellow	sandy peat and loam	layers
*Gentiana neaulia.....	April to June	1	blue	turfy loam and gravel	division
G. asclepiadea.....	July and August	1	purplish blue	loam and gravel	..
G. cruciata.....	June and July	1-1½	blue	loam and gravel	division
G. lutea.....	June and July	3-4	yellow	loam and gravel	division
*G. verna.....	May	1½	blue	loam and gravel	division
Gentiana verna.....	May	1½	scarlet	loam, peat, and grit	division
Gentiana verna.....	June and July	1½	yellow	loam and grit	division
G. pyramidalis.....	June and July	1½	rose and white silvery	peat and loam	division
Gillenia trifoliata.....	July and August	1½-2	foliage	..	..
*Geranium argenteum.....	June and July	1	white or pink	sandy loam	division
G. pratense flore pleno.....	June and July	2-3	blue	sandy loam	division
G. sanguineum.....	June to August	1-2	red	sandy loam	division
*G. sanguineum lancastriense.....	June to August	1-1½	red and striped	sandy loam	division
Glechoma hederacea fol. var.....	April and May	6-10	rosy purple	sandy loam	division
*Gyncrium argenteum.....	August to October	1-1½	white plumes	rich loam or peat	seed
*Helleborus niger.....	January to March	1-1½	white or pink	loam, sand, and leaf	division
*Helleborus niger.....	..	..	..	mould	..
*Hepatica triloba.....	February to March	1	blue	loam, sand, and leaf	division
*H. triloba, vars., double blue.....	..	..	..	..	..
" single red (rubra).....	..	..	..	..	..
" double red.....	..	..	..	..	..
" single white.....	..	..	..	..	..
" single pink.....	..	..	..	..	..
*H. angulosa.....	February to April	1	blue	loam and leaf mould	division
Helonias bullata.....	April and May	1-1½	purple	sandy loam	division
Hemerocallis flava.....	June	2	yellow	sandy loam	division
Hesperis matronalis.....	June to August	2	purple	rich loam and sand	division

(To be continued.)

SYRINGING GRAPES WITH GISHURST COMPOUND.

HAVING had this season to be unavoidably absent for a fortnight, I left a small house of Vines, just going out of flower, in the charge of my best man.

On my return I found that he had neglected to use the syringe, and one Vine which is not so well at root as might be desired, was sadly infested with red spider, and they seemed spreading over the house. I hurried on with the thinning, thinking to settle accounts with them by a moderate application or two of "Gishurst." Accordingly I dissolved 6 ozs. of

Gishurst on Thursday, and when, on Saturday night soon after four o'clock, I had finished thinning, I decanted the solution into three gallons of soft water, keeping back the sediment, &c. Considering that I had thus from 4 to 5 ozs. of the compound, I syringed the house with it, immediately following with six gallons of clean water lest the application should prove too strong for the Grapes.

Deeming all safe I left the house for the night, but to my surprise on Sunday I found most of the Grapes on which a

--G. ARREY.

drop of water had hung in the previous night brown on the under side, giving them a bad appearance when looked at from beneath. I had no help, the evil was done. I imagined that half of the crop had been destroyed; but I find during last week many of the most slightly-damaged berries have recovered, and the worst seem to continue to swell. The black spots are cracking without seemingly any injury to the berry, still I consider the case should act as a caution, and thought it well to report it to warn others who may be similarly situated.—J. Y.

AUSTRALIAN SPINACH.

At the commencement of last year, Mr. Ramel, who introduced into the French colony of Algiers the *Eucalyptus globulus*, has received from Australia a new vegetable. His friend, Dr. Mueller, of Melbourne, had it sent to him as a substitute for Spinach; it is superior in every respect to that vegetable, easier of cultivation, and of an enormous and rapid growth, less subject to run to seed, and also of better flavour. He called the plant New Queensland Spinach. The New Australian Spinach is, however, a better name. It belongs to a group in which is comprised our common Spinach; it answers botanically to the *Chenopodium auricomum* of Lindley, who described it in a few words in Mitchell's "Journal of Tropical Australia." It grows abundantly in the east part, following the course of the river Narran, and it is again found in Queensland. The *Chenopodium auricomum* is an annual, with a stalk rising to a yard high. In its general appearance it resembles *Chenopodium hybridum*, that troublesome weed which overruns our fields. The stalk is erect, robust, angular, fluted, streaked with a violet red.

As regards the eatable qualities of the plant, we have recently gathered an abundant harvest of leaves from two or three plants growing in our garden. These leaves were put into boiling water, and they were then cooked as an ordinary dish of Spinach, with this difference in favour of the new plant, that there was no occasion to take away the threads which are so disagreeable in Chicory, Sorrel, and ordinary Spinach. The flavour, analogous to Spinach, had something in it less harsh and less grassy in taste.

The cultivation is easy; sow the seed in April in a well-manured bed, for the plant is greedy; water it. The leaves may be gathered from the time the plant attains 18 inches in height. They grow up again quickly. In less than eight days afterwards another gathering may take place, and so on to the end of the year.—(*Journal de la Ferme et des Maisons de Campagne.*)

BURY ST. EDMUNDS HORTICULTURAL SHOW.

JOURNAL OF HORTICULTURE PRIZES.

Your two chaste and beautiful clocks, of the value of ten guineas each, are offered "for two desserts of not less than seven kinds of fruit of 1867."

1. The question has been asked if more may be shown; and suppose two desserts equal in quality were produced, one of eight dishes and the other of seven, would the additional dish give the prize to the dessert with eight dishes?

2. Or, suppose, again one had seven of the best dishes of fruit, and another showed twelve inferior, how far would the five additional dishes influence the award?

3. Also, would there be any objection to confine the number to seven dishes, quality and taste of arrangement alone to determine the award, irrespective of the disturbing force of varying numbers?

4. I presume the dishes are to be placed on the table as if it were a dining table, and the fruit may be garnished with flowers or leaves at the option of the exhibitor.—D. T. F.

[We will answer the queries in the order in which Mr. Fish has placed them.]

1. If a dessert of eight dishes of fruits is exhibited equal in quality and equally tastefully arranged as another dessert of seven dishes, the eight ought to receive the prize.

2. A dessert of seven dishes of best fruits ought to have the prize in preference to any larger number of inferior fruits.

3. We do not intend to limit the number of dishes, except that there must not be less than seven. The greatest number, combined with superior taste in the arrangement, ought to win.

4. The dishes are to be arranged on a table as if after dinner, and flowers or leaves, or both, or other ornamental ac-

companiments, may be employed as the taste of the exhibitor may dictate.—Eds.]

VARIEGATED PELARGONIUMS.

The subject of Variegated Pelargoniums was brought before the Floral Committee of the Royal Horticultural Society on the 2nd inst. It was then decided that Beauty of Oulton and others of that section cannot be considered Variegated Pelargoniums in the same sense as Flower of the Day, Mrs. Lennox, Mrs. Pollock, &c., but that a distinct class should be established, and that it should be called the Bronze and Golden Zonal section. The decision of the Committee was afterwards placed before the Council, and approved of and confirmed by them.

ROYAL HORTICULTURAL SOCIETY.

WEEKLY SHOW, June 29th.—Mr. A. Willie, gardener, Addison Road, Kensington, was awarded six extra prizes for Fuchsias, ornamental-foliaged plants, Caladiums, Pelargoniums, Ferns, and a basket of cut flowers. A first prize was obtained by Mr. W. Earley, gardener to F. Pryor, Esq., Digswell, Welwyn, for a collection of vegetables. From the Society's garden at Chiswick was exhibited a collection of plants made up with the following subjects—Pelargoniums, Portulacas, Petunias, Fuchsias, &c., and a box of cut blooms of *Liriodendron tulipiferum* and *L. tulipiferum obtusilobum*.

ROSE SHOW, July 2nd.—The display on this occasion was both large and excellent, and notwithstanding the hot sunshine which prevailed during the week preceding the Show, Roses exhibited a perfection and freshness that could hardly have been expected. Unfortunately on the morning of the Show rain fell heavily, and there were some pelting showers in the forenoon, which no doubt caused many intending visitors to alter their arrangements, and thus prevented so large an attendance as would otherwise have been the case; still the company was the largest and most brilliant that has assembled in the gardens this year, and the comfort with which the Exhibition could be inspected, contrasted most favourably with the Crystal Palace Show on the previous Saturday, which was overcrowded.

In Class I, for single trusses of 72 varieties, Mr. Cranston, of Hereford, took the first place with stands in which there were but few blooms that could be found fault with, and in which the following were particularly good—namely, Jules Margottin, Sénateur Vaisse, Mlle. Emain, white, beautifully tipped with rose, perhaps a little touched by the sun; L'Esmeralda, Prince Camille de Rohan, Maurice Bernardin, Pierre Notting, Souvenir de la Malmaison, Comtesse de Chabrillant, Madame Vidot, Général Jacqueminot, Dr. Andry, very fine; Madame Victor Verdier, Maréchal Niel, Sœur des Anges, John Hopper, Centifolia Rosea, Baron A. de Rothschild, Céline Forstier, and Devoniensis. Messrs. Paul & Son were second with beautifully fresh blooms of Alfred Colomb and Prince de Porcia, both very bright in colour; Louise Magnus, white; Exposition de Brie, Marie Baumann, Maurice Bernardin, Duc de Rohan, Gloire de Dijon, Madame Vidot, and Duke of Edinburgh, dark shaded scarlet. Mr. Cant, who was third, had very good blooms of L'Eclatante, velvety dark red; Xavier Olibo, very large; Devoniensis, Beauty of Waltham, Le Rhone, Charles Lawson, Madame Victor Verdier, Niphetos, Alfred Colomb, and Charles Lefebvre. Mr. Mitchell was fourth with, among others, Queen Victoria, one of the prettiest of the white Hybrid Perpetuals; Triomphe de Rennes, very beautiful; Gloire de Dijon, and Fisher Holmes. Messrs. Francis, of Hertford, also exhibited in this class.

Class 2, 48 varieties, three trusses of each, was very effective, presenting a rich mass of colour. Messrs. Paul & Son were first, and had beautiful trusses of Maurice Bernardin, Madame Charles Wood, fine cherry colour, though its beauty was a little tarnished; Prince Camille de Rohan, Pierre Notting, Marguerite de St. Amand, Alfred Colomb, Marie Baumann, Charles Lefebvre, Maréchal Vaillant, and Fisher Holmes. Mr. Fraser, of Lea Bridge, came second with stands in which we noticed Madame Rivers, Maurice Bernardin, Comtesse de Chabrillant, Mlle. Bonnaire, always delicately beautiful; Madame V. Verdier, Lord Macaulay, and Prince de Porcia. Mr. Cant, who was third, had some excellent Tea Roses, and Mr. Mitchell was fourth with Madame Plantier, a free-blooming Hybrid China variety, which had eleven blooms on the three trusses, Baron A. de Rothschild, and others.

In the next class, for 24 varieties, three trusses, Mr. Keynes, of Salisbury, was first with blooms remarkable for their freshness, and of which the most noticeable were Victor Verdier, Comte Alphonse de Serey, a beautiful clear crimson variety; Prince Henri des Pays Bas, crimson, shaded with purple; Pierre Notting, Madame Rivers, Exposition de Brie, half expanded; Madame Moreau, in a similar condition, and Charles Lefebvre not large, but very bright in colour. Mr. Cant was second, Mr. Cranston third, Messrs. Paul & Son fourth.

Class 4 was for single trusses of 24 varieties, and here again Mr. Keynes was first. His blooms of John Hopper, Victor Verdier, Maurice Bernardin, Madame C. Wood, and Alfred Colomb, were very fine. Mr. Cranston, who was second, had Duchesse de Caylus, very good; Gloire de Santeau, and La Brillante, very bright; and Louis XIV., remarkable for its fine deep blood red colour. In the third-prize

stand from Mr. Cant we noticed *La Rhone*, very rich in colour. Messrs. Lee, of Hammersmith, who were fourth, had *Antoine Ducher*, rose-coloured, and *Madame Therèse Levet*, salmon rose.

In the Amateurs' classes the exhibitions were most creditable for any season, and much more so for one so adverse as the present. Indeed finer Roses than many of those shown in the amateurs' stands have not been exhibited this season. For single trusses of 48 varieties Mr. Hedge, of Reed Hall, Colechester, was first; Mr. Moffatt, gardener to the Earl of Rosslyn, second; Mr. Chard, third; and Dr. Cooper, fourth. For 36 Mr. Hedge was likewise first, Mr. Chard and Mr. Moffatt being respectively second and third; and for 24 Mr. Postans, of Brentwood, was first, the Rev. E. Pochin, Sibley Vicarage, Longborough, second, and the Rev. V. Knox Child, Little Easton, third. It would occupy too much space to enumerate all the varieties shown well by the above exhibitors. Some of the most noticeable were *Cloth of Gold*, *L'Enfant Trouvé*, *Pierre Notting*, *Rubens*, *Comtesse de Kergolay*, fine deep crimson; *Marie Baumann*, *Vicomte Vigier*, *Laurent Descourt*, slaty violet; *Madame Hector Jacquin*, *Souvenir d'Elise Vardon*, *Madame Bravy*, *V. Verdier*, *Madame V. Verdier*, *François Lacharme*, and *Claude Million*.

In Class 8, 12 single trusses, equal first prizes were awarded to the Rev. E. Pochin and Mr. Postans for beautiful examples of *Maréchal Niel*, *Madame Villermoz*, *Baron Rothschild*, *Madame C. Joigneaux*, *Madame Boll*, *Gloire de Dijon*, *Duchesse d'Orléans*, *Madame V. Verdier*, *Prince Camille de Rohan*, *Gloire de Dijon*, &c. Mr. Soder, gardener to O. Haubury, Esq., was second; Mr. Skinner third.

For 18 new Roses of 1864 or 1865, Messrs. Paul & Son were first, Mr. Keynes second, Mr. Cant third, Mr. Fraser fourth. The varieties which were most conspicuous for their quality were *Marie Baumann* and *Alfred Colomb*, both very fine; *Exposition de Brie*, *Mdlle. Marie Rady*, *Pierre Notting*, *Madame Victor Verdier*, of a fine cherry colour; *Marguerite de St. Amand*, *Mdlle. Marguerite Dombrain*, *Abel Grand*, and *Princess Mary* of Cambridge, the last four much alike as regards colour. Many of the new Roses, however, were not in condition.

In Class 10, for 12 trusses of any new Rose of 1864, Mr. Keynes was first with fine trusses of *Marguerite de St. Amand*, and took a similar position in Class 11, for 12 trusses of any other new Rose, with *Exposition de Brie*; equal second prizes being awarded to Mr. Keynes for *Abel Grand*, and to Mr. Cant for *Marguerite de St. Amand*, very beautiful.

Mr. Turner exhibited Mr. Ingram's beautiful seedling, *Miss Ingram*, and received for it a first-class certificate. The only other seedlings which we noticed came from Mr. Laxton, of Stamford, and were named *Annie Laxton*, *Beauty of Stamford*, and *Empress of India*, the first two being deep rose-coloured, and the last a very dark kind.

In the class for 12 yellow Roses, of not fewer than six kinds, Mr. Hedge took the first prize with most beautiful examples of *Triomphe de Rennes*, *Cloth of Gold*, *L'Enfant Trouvé*, *Narcisse*, *Boule d'Or*, *Celine Forestier*, and *Maréchal Niel*. The prize for the best exhibition of yellow Roses was also awarded to Mr. Hedge, for a box in which he exhibited nearly the same kinds, and in which there were numerous magnificent trusses of *L'Enfant Trouvé*.

Of Tea-scented and Noisette Roses fine boxfuls were exhibited by Mr. Hedge, who was first both for single trusses and single blooms, and in the Nurserymen's class by Messrs. Paul & Son and Mr. Cranston, who were respectively first and second.

Moss Roses chiefly consisted of the old *White Bath*, *Lancei*, *Cristata*, and *Madame E. Ory*. Messrs. Paul & Son were first, Messrs. Francis second.

Vases of Roses were the same as at the Crystal Palace. The prizes were awarded to Messrs. Soder, Marlow, and Hedge. The best bouquets came from Mr. Hedge, and were set up in coloured lilyacinth glasses.

The only pot Roses exhibited came from Messrs. Paul & Son, and consisted of small plants in good bloom. A large collection of cut blooms, not for competition, was shown by Mr. Keynes.

FLORAL COMMITTEE.—Messrs. Veitch sent a numerous and fine collection of novelties, of which the following received first-class certificates—viz.:—*Gloxinia Vlanderen*, white with a purplish crimson lip; *Gloxinia Madame de Suet*, pure white, with a violet-bordered lip; *Croton irregularis*, with rather narrow green leaves and a yellow stripe up the midrib; *Croton maximum*, with broad, pale green leaves veined with yellow; *Croton interruptum*, having narrow leaves, with yellow midrib changing to red; *Dracena Moorii*, with broad olive-brown leaves having red midrib; *Selaginella Ponteri*, with minutely divided foliage; *Phajus* species, with showy bluish-lilac flowers, having a deeper-coloured lip bearing raised yellowish processes; and *Begonia Veitchii*, with large bright scarlet flowers. The last is perfectly hardy, and must be considered a most important acquisition. *Abutilon Thompsonii*, also from Messrs. Veitch, was awarded a second-class certificate. Its leaves are blotched and spotted with yellow, and as shown it had a pleasing appearance. Mr. Edwards, Nottingham, had first-class certificates for the following Ferns—viz.:—*Athyrium Filix-femina* *Edwardsii*, *A. F. Footii*, *Polystichum angulare diversilobum* *Padleyi*, and *Scelopendrium vulgare* *Edwardsii*, a pretty variety. Mr. William Paul received first-class certificates for two fine *Phloxes* named *Beautiful* and *Conqueror*. Both had very large trusses of beautiful light flowers with a violet crimson eye; that of *Conqueror* the deeper in colour. A first-class certificate was likewise awarded to Mr. Fraser,

for *Gloxinia Rose d'Amour*, carmine with a white throat. Special certificates were awarded to Mr. Richards, gardener to Lord Londesborough, Grimston Park, Tadcaster, for a fine specimen of *Vandates* on a block in a pot, and bearing eleven flowering spikes; to G. F. Wilson, Esq., Weybridge, for a magnificent specimen of *Lilium longiflorum*, with nine pure white blooms, each about 7 inches in length and about 5½ inches in diameter at the mouth; to Mr. Mann, Brentwood, for a collection of Variegated and other *Pelargoniums*; to Mr. Bull for a fine collection of *Lilium auratum* to the number of fifty pots; and to Mr. Wills for a collection of his fine *Pelargoniums* of the Bronze and Gold section. Mr. Jabez Chater, of Cambridge, likewise received a special certificate for a similar collection, along with which was a specimen of *Gaillardia aristata splendens* with large and showy red and orange blooms.

A special certificate was likewise granted to Mr. Mandell, gardener to J. C. Cunliffe, Esq., Hooley, Croydon, for a fine specimen of *Lilium auratum*, standing about 7 feet high, and bearing thirteen blooms; also to Mr. Anderson, Meadow Bank, for cut Orchids, among which was *Saccolabium Blumei* *Dayanum*, with a flowering spike about 18 inches long. Messrs. Ivery sent a small collection of showy *Porrogloves*, and Messrs. Lee a plant with broad lathery foliage, which, though shown under the name of *Hedera catalpaefolia*, proved to be an *Araliaceous* plant. Messrs. E. G. Henderson received first-class certificates for *Lobelia pumila elegans* and *Tricolor Variegated Pelargonium Lady Sheffield*.

FRUIT COMMITTEE.—Mr. F. Dancer, of Little Sutton, Chiswick, exhibited some remarkably fine clusters of the Red and White Dutch Currants; and Mr. Merrett, gardener to Henry Whiting, Esq., Battersea Rise, eleven fine Barrington Peaches, set closely together on the same branch, grown in an orchard-house. Mr. Seale, gardener to Col. Davis, Pentre, Newcastle Emlyn, sent a Scarlet-fleshed Melon called *Seale's Hybrid*, which, however, was not of sufficient merit to require notice.

GENERAL MEETING.—W. W. Saunders, Esq., in the chair. The business was confined to the election of seven new Fellows.

ROYAL BOTANIC SOCIETY'S SHOW.

THIS Society's third and last great Show for the season was held yesterday, and was as usual very attractive. The collections of stove and greenhouse flowering and fine-foliaged plants were numerous and excellent. There was likewise a good though not large display of Orchids. *Pelargoniums* were also well represented; and of the so called *Scarlet* varieties, some exhibited by Mr. Ward, gardener to F. G. Wilkins, Esq., were remarkably fine, especially *Rose Rendatler*. *Croton angustifolium*, exhibited in one of Mr. Williams's collections, was the most beautiful specimen of that fine species which we have ever seen. It resembled a golden waterfall.

Fruit, however, formed the most interesting feature of the Show. Several excellent collections were exhibited, prominent in which were very fine bunches of Black Hambrogh Grapes from Mr. Rawbone, and Mr. Miller, gardener to Lord Craven, Combe Abbey; those from the latter, however, though very large, had not the fine jet black hue presented by the bunches shown by some other exhibitors. There were many very well-ripened Pine Apples of good weight; but though some of the Peaches were very large and fine, these were not so numerously shown as in former years.

CRYSTAL PALACE ROSE SHOW.

JUNE 29TH.

THE great Rose Show held at the Crystal Palace on Saturday last was a decided success. It is true it was scarcely so extensive as last year, but this could not be wondered at considering that the severe frost of January caused such havoc in collections, and the burning sun of the last few days also, no doubt, prevented many persons from exhibiting. Notwithstanding the unfavourable character of the season, however, it was a matter of surprise and congratulation to find the display so extensive and the varieties shown in such good character. The day being one of the finest which we have enjoyed this summer, the attendance of visitors, always large at a Crystal Palace Rose Show, was even more numerous than in previous years, amounting to but thirty short of 15,000.

In the Nurserymen's classes Mr. Cranston, of Hereford, was first in that for single trusses of seventy-two varieties. His stands contained a remarkably large bloom of *Madame Morean*, *Madame Brianson*, splendid bright carmine; and beautiful examples of *Maurice Bernardin*, *Marguerite de St. Amand*, *François Lacharme*, *Christian Putner*, *Madame Clemence Joigneaux*, *Gloire de Dijon*, *Charles Verdier*, a splendid new rose-coloured flower; *Madame C. Crapelet*, *Madame Bravy*, *Madame C. Wood*, *Baron de Noirmont*, *Mrs. Rivers*, *Charles Lefebvre*, and *President*. Messrs. Paul & Son, who were second in the same class, had among others their new Rose, *Duke of Edinburgh*, velvety deep red; *Madame C. Crapelet*, exquisite; *Olivier Delhomme*; *Marie Baumann*, a splendid new crimson variety, which was also exhibited in several other stands, and was everywhere beautiful; *Exposition de Brie*, *Beauty of Waltham*, *Senateur Veisse*, *Reine de Porcia*, *Xavier Olibo*, *Maurice Bernardin*, *Général Jacque-*

minot, which was good in almost all the collections in which it was shown; Prince Camille de Rohan, Alba Rosea, and Rushton Radclyffe. Mr. Mitchell, of Pittdown Nurseries, near Uckfield, who was third, had fine trusses of Triomphe de Rennes, Maréchal Niel, Lamarque, Elise Sauvage, Louise de Savoie, Souvenir de la Malmaison, Madame Furtado, Senateur Vaisse, Xavier Olibo, and Victor Verdier, the last very beautiful. Messrs. Francis, of Hertford, were fourth.

Class 2 was for 48 varieties, three trusses of each, and proved most effective. In the fine stands of Messrs. Paul & Son, who were first, we particularly noticed Comtesse de Chabillant, Lord Clyde, John Hopper, Madame Rivers, Beauty of Waltham, La Brillante, Madame C. Crapetel, splendid, Madame Bravy, and Souvenir d'un Ami. Mr. Mitchell, who was second, had beautiful trusses of Souvenir d'Elise, Leopold Haussburg, Olivier Delhomme, Madame C. Crapetel, Victor Verdier, Triomphe de Rennes, Elise Sauvage, Maurice Bernardin, and Gloire de Dijon. Mr. Fraser took the third prize with fine examples of John Hopper, Maurice Bernardin, Senateur Vaisse, Souvenir de la Malmaison, Paul Ricant, Comtesse de Chabillant, Mrs. Rivers, Leopold Haussburg, and others. The fourth prize was awarded to Messrs. Francis, of Hertford.

In Class 3, 24 varieties, three trusses of each, Mr. Cant, of Colchester, was first, Messrs. Paul & Son second, Mr. Cranston third, Mr. Keynes of Salisbury fourth. Mr. Cant had very fine trusses of Madame Bravy, Marie Baumann, Madame Victor Verdier, John Hopper, Comtesse de Chabillant, Prince Camille de Rohan, Le Rhone, Exposition de Brie, and La Brillante, the last glowing bright crimson. In the other stands most of the varieties already enumerated were shown in fine condition. Général Jacqueminot, Charles Lefebvre, Mrs. Rivers, Olivier Delhomme, Mdlle. Bonnaire, and Victor Verdier were especially fine.

In Class 1, 24 varieties, single trusses, Mr. Cant, Mr. Keynes, and Mr. Mann, of Brentwood, took prizes in the order of their names.

In the Amateurs' classes the exhibitors were numerous and the quality on the whole very good, the best stands approaching more closely than usual to those of the nurserymen. Mr. Hedge, of Reed Hall, Colchester; and Mr. Ingle, gardener to C. G. Round, Esq., Birch Hall, Colchester, took the first and second prizes in the classes for 48, 36, and 24 varieties. Among the varieties which they exhibited were fine examples of Coupe d'Hébé, Senateur Vaisse, Marie Baumann, Mrs. Rivers, L'Enfant Trouvé, Maréchal Niel, Madame Boll, Cloth of Gold, Jules Margottin, and many others. Mr. Chard, gardener to Sir F. H. Bathurst, Bart., was third in the class for 48 varieties; and Mr. Moffatt, gardener to Lord Rosslly, Easton Lodge, Dunmow, fourth, the latter being also third in the classes for 36 and 24. Mr. Postans, of Brentwood, and Mr. Skinner, Westerham, had the fourth prizes in these two classes. Very good stands from Rev. E. Pochin, Mr. Postans, Mr. Hedge, and Mr. Chard took the four prizes offered for 12 varieties.

New Roses will form the subject of a paper which will shortly appear. Among them Marie Baumann, before referred to, was particularly noticeable; also Mdlle. Annie Wood, beautiful scarlet; Thorin, bright pink; and Souvenir de William Wood, a very dark flower. Hippolyte Flandrin and Horace Vernet were also good. Mr. Turner, of Slough, had a first prize for the beautiful seedling variety Miss Ingram, described last week. Mr. Cant, of Colchester, and Messrs. Paul & Son had equal first prizes for collections of new Roses, and Mr. Keynes a third prize for the same; and for new Roses in pots, Messrs. Paul and Son, who were the only exhibitors, had a first prize.

Of Yellow Roses Mr. Hedge sent a beautiful stand, containing L'Enfant Trouvé, Enfant de Lyon, Jeanne de Smith, and Maréchal Niel. Those from Mr. Bristow, gardener to G. Orme, Esq., Broadwater, Worthing, to whom the second prize was awarded, were also very good. Tea-scented and Noisette Roses as shown by Messrs. Paul and Son, Mr. Hedge, Mr. Ingle, and Mr. Bristow, were also fine. Messrs. Paul and Mr. Hedge had first prizes, Mr. Ingle and Mr. Bristow the second and third.

For Decorated Vases of Roses the prizes were awarded to Mr. Ingle, Mr. Marlow, and Mr. Soder, and in each case the stands were similar to Marsh's; in each Ferna were introduced at the base and in the top dish, and in each Japanese Honeysuckle was twined up the stem.

Mr. Turner, of Slough, exhibited, not for competition, a large number of boxes filled with gorgeous cut trusses of blooms—how many we could not venture to say, for by this time the visitors were densely packed round the tables, and only an occasional glimpse could be caught of the flowers, progression becoming almost impossible, and all hopes of taking notes had to be given up. Collections were likewise shown by Messrs. Paul & Son and Mr. Hedge.

A few miscellaneous subjects were shown. Among them was a fine specimen of *Peristeria elata*, or the Dove Plant, exhibited by Mr. Seowen, Park Lane, Croydon. It had six flowering stems, each nearly 5 feet high, and several of its yellowish white flowers, the centre of which bears a singularly close resemblance to the form of a dove. To this an extra prize was given, and others were awarded to Messrs. Carter and Messrs. Smith, of Dulwich, for Tricolored Pelargoniums; to Messrs. Paul & Son for Roses in pots; and to Mr. Perry for Verbenas. Messrs. Downie, Laird, & Laing had first-class certificates for Rose Stella, Hon. G. Hardy, and Countess of Rossllyn Pelargoniums, and for Imperial Blue Pansy; and Mr. Mann, Brentwood, had a similar award for his fine scarlet Pelargonium Lord Derby.

IMPLEMENTS, &c., AT THE LATE MANCHESTER HORTICULTURAL EXHIBITION.

THESE were exhibited on the lawn right and left of the walk leading from the entrance-gates to the Exhibition-house, and were numerous, and in many instances good. Many of them received first-class certificates. The first which I shall mention is the simple but most useful swing water-barrow, manufactured by Mr. W. S. Boulton, Norwich. I have no hesitation in pronouncing this one of the most useful things ever introduced into a garden. I have had two of them in constant use for the last two months. The carriage is very light and simple, and by having two or more tubs with each carriage a very large amount of work may be done in a short time. I have had some taps fixed in different parts of the gardens for filling the tubs, one tap is left to be filled at the tap whilst another is being carried on the barrow to whatever part of the garden the water may be required. On its arrival there it is easily placed on the ground by raising the handles of the water-carriage. The third tub is taken back by the carriage; by the time it reaches the tap the other is full. Three or four men will by this simple contrivance water a very large space of ground in a short time. I should strongly recommend for large gardens two carriages and six tubs. Each tub holds thirty-six gallons. Where the walks are in good order the carriage is easily drawn by one man. The price of the carriage with one tub is 45s., carriage paid to any railway station in England. This very deservedly received a first-class certificate. Messrs. Dickson & Brown, of Manchester, received a first-class certificate for a large collection of mowing machines of different makers. Amongst these Shanks's was considered by the Judges the best.

Mr. Bennett, of Liverpool, exhibited one of Beard's patent metallic non-conducting glass-houses. The machinery for ventilating is fitted to a very great nicety, and the adjustment so complete that a child may give air to a whole range of houses. It is done by means of a screw attached to an iron rod, which is fixed to the rafters just under the ridge of the roof, to which a row of short lights is fixed by means of short cranks at one end of the house. There is a set screw, and when it is found necessary to open the lights at the top of the house, by turning this screw the lights are pushed out; they are shut by turning the screw the reverse way. The side lights at the base are opened in a similar way. It is certainly a very simple and effective mode of giving air. The house altogether I thought rather too expensive. One of the uses for which I thought it might answer well for forcing Strawberries. If a structure of this sort had the best appliances for heating it, I think with the constant circulation of air and the large amount of light the plants would have, that Strawberries might be grown to great perfection. This, also, received a first-class certificate.

Messrs. Hunt & Pickering, of Leicester, received first-class certificates for their newly-designed cast-iron vases and balconets. These are certainly very neat and durable.

J. Jones's patent terminal boiler was considered by the Judges the best of all exhibited on this occasion. It also received a first-class certificate. I likewise noticed a machine for edging walks, and for cutting and rolling verges. It appeared to perform its work well. It received a first-class certificate. There were also many other articles which received certificates, such as spring chairs, garden seats, rollers, wire stands, wire arches, rustic summer-houses, portable apparatus for heating halls, &c. These were considered very useful.—J. WILLS.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE twenty-fourth Anniversary Meeting was held at the London Tavern on Thursday last, June 27th, Sir Robert Peel, Bart., in the chair. Among those present were G. F. Wilson, Esq., Major Trevor Clarke, J. Bateman, Esq., T. B. Gibbs, Esq., Messrs. Moore, Wrench, Veitch, Henderson, Lee, Turner, Fraser, Williams, Cutbush, and others to the number of about one hundred in all.

After the usual loyal toasts,

Sir ROBERT PEEL, Bart., in proposing the toast of the evening, "Success and continued prosperity to the Institution," said that in a company composed, as on that occasion, of hearty well-wishers to the Institution, it would, without doubt, in the opinion of some appear to be superfluous to expatiate on the advantages of this and similar institutions, but he trusted the company would admit how necessary these were for the exercise of present benevolence by subscriptions and for posthumous charity in the shape of bequests. No one in the room, he was certain, would deny him the privilege of pressing the claims of the Institution. At the present day industrial co-operative societies were being formed throughout the land, and were largely patronised by the trades to which they belonged, but none was more worthy of support than the Gardeners' Royal Benevolent Institution, and support it should receive from those whose duties, whose occupation in life, and whose sphere of action were connected with horticulture. He rejoiced to hear from the Secretary that there was a large number of head and foreman gardeners who contributed to the Society, and were laying by a store for a rainy day—for a time when old age came upon them under circumstances which might involve the best-conducted and

most thrifty among us. He rejoiced to find the Institution so well supported by gardeners of all classes throughout the country, and he hoped they would use their influence to induce every gardener to join so excellent an Institution, not merely as a provision for themselves should they require it (as he hoped none present ever would), but to help their less fortunate brethren. Let them look at the list of subscriptions—there were good names from the Sovereign on the throne to the man who had earned his position by the sweat of his brow. It was usual for the Chairman on similar occasions to enter into the history of the Society, but he would merely say that at present a sum of something like £800 per year was distributed among those who had fallen back on its funds. Consider what good, what happiness this sum has caused among those who would otherwise have been destitute. When he said that the Institution was well worthy of support, he could not on seeing the beautiful display of flowers and fruit around him refrain from thinking what a charm they diffused. He took a delight in horticulture, and there was no one in the room—no, not in the country—who took a greater interest in flowers from the beautiful Rose before him to those productions which their friend Mr. Voitch sent out in such profusion. After adverting to the fruit from the gardens of H.R.H. the Prince of Wales at Sandringham, which formed a portion of the dessert, Sir Robert said that when at Manchester last year he was told by many a poor man that his greatest enjoyment was his garden, sometimes in that crowded city only a window garden in a fifth or sixth storey. Sir Robert Peel then adverted to the great improvement in the parks of the metropolis, and especially Battersea and Hyde Parks, to the advantages likely to result from the establishment of soldiers' gardens, and finally, to the contributions of flowers and plants which had been sent to decorate the room, and he concluded by proposing the toast, which was enthusiastically received.

Sir WALTER STIRLING, Bart., in proposing the health of the Chairman, said that it had been his singular good fortune to be acquainted with the first, the second, and the third Sir Robert Peel, and there never were three men more devoted to the good of their country. After eulogising the Chairman's ability as a statesman and speaker in the House of Commons, Sir Walter Stirling thanked him for his advocacy of the Institution, and his liberal donation to its funds (20 guineas, and 10 guineas from Lady Emily Peel).

The CHAIRMAN, in returning thanks, said that nothing gave him greater pleasure than to be able to do anything to improve the condition of his fellow creatures, and if his presence at any time could be of assistance he would be most happy to attend. He then begged to propose the health of the Treasurer, Mr. Wrench, who had devoted much of his time to the interests of the Institution, and whose services could not but meet with the cordial approbation of the friends of the Institution.

Mr. WRENCH having returned thanks, Mr. Cutler, the Secretary, read a list of subscriptions amounting to, it was stated, upwards of £500.

The health of the Secretary having been drunk, the CHAIRMAN proposed the House of Legislature, coupled with the name of Mr. Bass, M.P., who had recently presented the town of Derby with the magnificent gift of several acres of land as a recreation ground. The Chairman added, that he had endeavoured to induce the Duke of Argyll to take the chair at the next anniversary, but he would not promise so long beforehand. If, however, the Duke could not preside, no one could do so more efficiently than Mr. Bass.

The Chairman having to attend an important division at the House of Commons, vacated the chair in favour of J. Bateman, Esq., and after some other toasts the meeting separated.

The room was decorated with a rare display of fine-folaged plants, Pelargoniums, &c., contributed by Mr. Williams, Mr. Turner, of Slough, and Mr. Fraser, and some fine fruit, already referred to, sent from Sandringham; and a liberal dessert came from five other gardens.

NEW BOOK.

British Grasses: An Introduction to the Study of the Gramineæ of Great Britain and Ireland. By MARGARET PLUES. Reeve and Co., London.

WHEN this volume was placed on our table it so happened that we were searching for information relative to one species of Grass, and we had before us Sinclair's "*Hortus Gramineus Woburnensis*," Zuccone's "*Plantæ Fourragères*," Curtis's "*British Grasses*," Parnell's "*Grasses of Britain*," Buckman's "*Meadow and Pasture Grasses*," White's "*Indigenous Grasses of Ireland*," and Stillingfleet's "*English Grasses*"—a tolerable array of authorities;

"And yet the eighth appears, bearing a glass
Which shows us many more."

for it contains quotations from others of very varied merit. Yet this volume by Miss Plues is not superfluous, for it combines much information well concentrated from other sources, and a good compiler is more useful than a bad originator. Miss Plues, however, acknowledges to some extent to whom she is indebted; but we hope when a second edition is required she will call her authorities by their right names. The work

is with forty-three coloured portraits of Grasses, and more than one hundred woodcuts of the species and their flowers magnified. It is suitable to the end the authoress aims at—to induce English ramblers to cultivate acquaintance with the Grasses.

With that word—Grasses, what a narrow and erroneous association of ideas is usually combined—the *Poa annua* on our gravel walks—the carpeting of the lawn—the herbage of our meadows and pastures, but nothing more. How mistaken is this restriction most of our readers are aware; but some will be surprised to know that the 50 feet Bamboos of India, the Sugar Canes of the tropics, and the cereal plants of the world are all Grasses.

The landress's starch, our bread-stuffs, our sugars, our spirituous liquors, and our beer; Panama hats, Leghorn bonnets, the Esparto sacks and mats of Spain, the stouter papers of China, the straw paper of England, the Kuskus fragrant anointing oil of Hindostan, and many, many other sustainers and comforts of life we owe to the Grasses. When we use the collective term "bread-stuffs" we do not merely intend Wheat, Rye, Barley, and Oats, but Rice, on which about three-fourths of mankind exist; Maize, far more extensively cultivated than Wheat; the *Paspalum* exile, yielding the Hungry Rice; various Millets, the chief food of African negroes, and of some Europeans and Asiatics; and manna-croup, prepared from the seeds of *Poa fluitans*.

Nor are the Grasses deficient in minor utilities. Table-mats are made of their flower-stems; the young shoots of Maize are eaten as Asparagus; "Job's Tears" are the seeds of *Coix lachryma*, and are worn as beads; the awns of the Feather Grass are so ornamental as to be compared to the feathers of the bird of paradise; the various species of *Arundo* have dusting brooms made of their panicles, and garden screens of their stems; fishing-rods are formed of the woody stem of *Arundo donax*; Indian fans are made of the leaves and stems of *Anatherum muricatum*, and the Pampas and Ribbon Grasses adorn our gardens.

"The Grasses," says Linnaeus, "are the most general of plants, constituting almost a sixth part of all the vegetables on our globe, especially in open situations. They are the most important of plants, especially as affording the chief sustenance of animals who feed on vegetables. They furnish the verdure of our summers, and spread a carpet over our meadows. Their leaves are not easily damaged, even by our walking over them; and though winter destroys their foliage, and the early spring finds them dry and withered, they revive in a wonderful manner from apparent death. How solicitously has the Author of Nature protected these plants, by giving them such hard stems, while they are perfecting their seed, that cattle cannot readily attack them in that state! Then, on the other hand, they are so constituted that the more their herbage is cropped, or hardly used, the better they thrive and extend themselves the more under ground. That they may be able to exist in almost every situation, their narrow spiny leaves are purposely contrived to insinuate themselves between other plants."

Such care for their preservation is an assurance of their utility, and we might fill a large space with a bare detail of more than we have already noted of their aids to mankind; we might dwell upon those, the roots of which are their special value, such as those sustaining our horses in hot climates, and binding down the otherwise fleeting sands of our coasts, and, lastly, we might enlarge on their being the chief promoters of the dews which refresh the earth, and the daily suppliers of oxygen—the vital air of man and all animals.

DRY-EARTH METHOD OF DEODORISATION ON BARON ROTHSCILD'S ESTATE.

(Read at the Leamington Sewage Congress, by Mr. James, of Halton, Tring.)

I HAVE been requested to tell to this Congress the story of the Halton drainage, and I shall do it as shortly as possible, with the firm belief that it will induce many of the noblemen and gentlemen whose desire to benefit their neighbours has brought them here to-day, to follow the example of Baron Rothschild—an example, as it seems to me, so calculated to confer equal benefits upon the cottager and the proprietor.

The village of this country, when situate near the mansion of the great proprietor, generally presents a most picturesque appearance of neatness and comfort; but you cannot help noticing the small buildings dotted here and there through the

gardens. They are the plague spots of the village; few in comparison with the cottages, for the proprietor is unwilling to multiply such centres of disease. They stand in situations of indecent publicity, at a distance from the tenements, for both cottagers and proprietors avoid encountering their foul exhalations oftener than necessity obliges. But nobody has had the faintest idea of the manner by which these hotbeds of fever could be turned into pleasant places and sources of profit to those who had hitherto experienced nothing but annoyance from them.

This was much the condition of Halton some months ago. At that time attention was called to the practice of the earth method, through the writings of the Rev. Henry Moule, Vicar of Fordington. Two closets were fitted and used with such perfect success as to lead at once to its application in twenty-five others; still with such satisfactory results as to induce Sir Anthony de Rothschild to make arrangements for using them extensively in the adjoining village of Aston Clinton.

Many here are already well acquainted with the practice of this method; but for the benefit of the uninstructed, I will shortly say that 1½ lb of dry earth is cast upon the soil and urine, thoroughly and instantaneously deodorising the one, and perfectly absorbing the other. At first, whilst the method was being treated experimentally, the soil and earth were caught by a metal vessel pushed under the seat from the back, which was removed every morning, but it soon became apparent that this was unnecessary. Cesspools of bricks are now substituted, to be cleared out once in three months, or at longer intervals, according to their size or the convenience of the tenant, without the smallest offence to any one. It is then taken to the earth shed and redried, to be again passed through the closet. There is good evidence that this operation may be repeated six, eight, or ten times with cumulative power of fertilisation, and obvious economy of earth and transport. The earth whilst redrying, does not emit any unpleasant odour, even when subjected to the fiercest summer heat. In winter it will be necessary to carry on this operation by means of a small kiln; one large enough for the requirements of a thousand people may be constructed for less than £20. The population to whose wants the Halton establishment will attend numbers about eight hundred, widely scattered through the villages of Halton, Buckland, Weston, Turville, and Aston Clinton. It is calculated that the operation may be efficiently performed by a man and boy, with the assistance of one horse and cart. The round of all the closets will involve a journey of eight miles. The same force employed in a town would probably satisfy the requirements of double such a population.

Those who wish to see the earth method adopted by the cottagers without employing a man specially to attend to it, should have an opening made at the backs of the closets through which they may throw a shovelful or two of dry unsifted earth each day, with the same practical result as that afforded by the more refined apparatus of Mr. Moule. I can speak to the fact that the whole operation, from first to last, is carried through without the least unpleasantness. One of its most valuable results being that the offensive and conspicuous objects, to which I have just alluded, may now be so arranged as to form a portion of the house, without inflicting the smallest annoyance on the tenant. The cottagers express themselves grateful for this addition to their health and comfort. The village has now no foul smells, nor are the ditches any longer filled with liquid filth.

This is the result of a simple mixture of dry earth with human soil, and which, if applied to towns, would not involve, in any case, the necessity for baking excreta in a pie-dish, as has been suggested by a noble correspondent of the *Times*. An engineer has written to that journal to say that earth does not deodorise human soil; but as I cannot disbelieve the evidence of my own senses, I most positively affirm that it does, not partially, but completely and instantaneously. There is no reason, however, why any time should be consumed in discussing that part of the question, because there is no man within the four seas so poor as to be unable to make the experiment and judge for himself at any time; besides, you have the undeniable testimony of the great Lawgiver, Moses, in his well-known rule for the sanitary arrangement of Jewish camps. (Deut. xxiii. 12, 14.)

There is, however, one great obstacle to the success of the earth method movement, and I do not think it can be exaggerated. It is the difficulty of inducing the public to believe that a system which requires no science to apply it, and little capital to work it, but which must, at the same time, yield a very con-

siderable profit and confer immense benefit on agriculture, can really be worth trying; and so I urge the noblemen and gentlemen here present to-day to see it applied to the cottages over which they have control; whilst the cottagers will be grateful, the safety of the proprietor will be ensured, for there is no knowing when the fever generated in the village may strike a deadly blow in the mansion of the rich. To the clergy I strongly recommend its adoption in their schools; it will imbue the scholars with ideas of decency and comfort, which they will not fail to apply in after life. I earnestly entreat all classes to unite in obtaining its general adoption throughout the land, and I deliberately assert my belief, that whoever tries it honestly and fairly will join with me in recommending it to all his neighbours. One of our domestic animals afflicts us with abominations which we have all experienced, but give this crafty creature free access to dry earth, in-doors or out, and it sets mankind an example of thrift and cleanliness which it is stupid not to follow; for when the fruits of the earth, after satisfying the wants of man, are returned to do for it at a small cost what Peruvian guano does at vast expense, we shall have the water unpoisoned and full of fish, with land of increasing fertility, without fever; whilst the public will believe, as I believe now, that no movement so fraught with benefit to the public health has ever had place since the days of Jenner.

NOTES AND GLEANINGS.

It does not seem to be generally known that the privileges of the Fellows of the Royal Horticultural Society extend to a free admission to the Great Exhibition which is to open at Bury St. Edmunds on the 16th inst. All who become Fellows of the Society before that date will be entitled to exercise this privilege.

— In addition to those named last week, the following Floral and Horticultural Societies have announced their intention to hold exhibitions and meetings during the present month:—

July 4th	Northampton Floral and Hort. Fête.
" 5th	Tunbridge Wells.
" 9th, 10th	Leicester.
" 13th	Denny and Dunipace, N.B.
" 17th	Newport (Salop).
" 16th to 19th	Royal Horticultural, Bury St. Edmunds.
" 19th	Leslie, N.B.
" 30th	Royal Oxford.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Let a plot of ground be trenched and highly manured forthwith to receive a good breadth of *Cauliflowers* and *Walcheren Broccoli*. Grange's Impregnated, if true, is also most valuable, as it is of a self-protecting character, and if planted with the Cauliflowers it will form a complete succession. Attention to planting the above will insure a supply throughout November, December, and even January. *Colcverts*, sow more of the dwarf and compact kinds, also a pinch of *Chertil* and *Corn Salad*. *Endive*, sow a little every week in July. *Herb-cutting* must be attended to, choosing a perfectly dry day, and cutting the moment the plants begin to blossom. *Lettuce*, good breadths of *Brown Cos* may soon be sown, as it will not be liable to run. *Peas*, the crops of Knight's Marrows and British Queen should be topped when at the top of their sticks; they will branch out sideways if the ground has been thoroughly prepared. Let late *Peas* have every encouragement, especially by thorough sticking. Give plenty of water to *Celery* recently planted, and pick off any leaves that may be seen marked with the fly. The soil in which this crop is planted cannot be made too rich.

FRUIT GARDEN.

Apple, Plum, and Cherry trees having crumpled foliage, from being infested with aphids, should be rather unsparingly shortened, and the removed portions burned. After the trees have been gone over they should be syringed with gas liquor mixed with eight or ten parts of water. This will destroy many kinds of insects, but will take little or no effect upon the American blight. Where this appears it will be necessary to apply naphtha with a small brush. The naphtha distilled from coal tar is the cheapest, and answers this purpose quite as well as the more expensive kinds. The late rains have been favourable to the production of Strawberry-runners, and as soon as a sufficient number have struck root for the purposes of forcing

and the formation of new plantations, the further progress of the runners should be stopped. Some good soil should be prepared for the reception of the plants as they become sufficiently rooted for bedding-out. They will thus be strong for final planting-out in autumn, and will bear well next season. Cut off the bloom from the latest Alpine Strawberries; the flowers after this period will be sufficient for the latest crop.

FLOWER GARDEN.

Continue to clear away everything decaying, and to introduce good plants from pots in the reserve ground. A good reserve garden, if properly situated and systematically planned and conducted, would be one of the most useful plots of ground about a garden. Such a valuable adjunct would, however, require the constant attendance of a man possessing some little knowledge of flowers, and therefore could not be carried out where there is a deficiency of labour power. Decayed patches of bulbs, which are required to stand for early-spring flowering, may have Verbenas or other plants introduced from pots between them. Cuttings of Pansies should be planted out in succession before the shoots are too much exhausted. Remove from standard Roses all suckers as they appear; likewise shorten back any over-luxuriant shoots, and bud choice kinds. Beds that have been filled with early-blooming annuals, &c., should be cleared off, and replanted with other things. The plants raised from the first sowing of Brompton Stocks should be pricked out in borders and pots, placing the latter in the shade for a few days, and then exposing them to the influence of the sun and air. Continue to put in pipings of Pinks. Extract decayed petals from the pots in which the seed is forming. Auricula and Polyanthus seed ought to be carefully collected. It should be retained in the capsules till the proper season for sowing. Perhaps the best way of preserving it is to tie the stems together in small bunches, insert them in thin paper bags, and suspend them in a dry, airy place.

GREENHOUSE AND CONSERVATORY.

This should now be a perfect blaze of flowers. Balsams, Cockscobs, Hydrangeas, Gardenias, Fuchsias, &c., should constitute important objects of decoration at this season, intermingled with various hardwooded plants, which are, of course, in-doors whilst in flower. The beautiful Japan Lilies are now fast approaching perfection. As they are succulent in growth, never stint them of water, but keep them well and liberally supplied. The flower-stems should be properly staked, so as to keep them within due bounds. Clerodendrons will enjoy liquid manure constantly, with liberal shifts if not already done. The Tree Violets should have the side shoots constantly pinched off. Sollya heterophylla is a very useful plant, and deserving a place in every greenhouse; fixed to the trellis and constantly stopped, it forms a very ornamental shrub. The Camellias out of doors to be surfaced with fresh soil if they require it. Cinerarias, whether seedlings or suckers, should have regular attention, and those intended for autumn must be potted forward without delay. Fuchsias look best when grown in the pyramidal shape; the drooping branches should display a uniform appearance all around the plant, the outward young shoots being secured to the main stem by twisted bast in preference to the old method of tying each branch to a separate stick. Afford a free admission of air, shade from bright sunshine, and give liquid manure occasionally.

STOVE.

Endeavour from this period to establish rather a robust than a rapid growth in the majority of stove plants. Do this, and give air most freely at all fitting opportunities, avoiding, however, cold currents. Continue to keep Orchids in a growing state actively at work, in order to secure large pseudo-bulbs, for on this depends the flowering. When they only produce bulbs weaker than those of the preceding season there must be something wrong, and they will, of course, flower much more weakly, if at all. Maintain a very humid atmosphere by copious syringings, or whatever other means there may be at command. Plants which are coming into bloom should be removed into a cooler temperature, exposing them gradually.

PITS AND FRAMES.

Cuttings of herbaceous plants should be put in under hand-lights in shady situations. Shift and stop Chrysanthemums, applying manure to them occasionally. Shift Balsams and other tender annuals; shade during the heat of the day, and sprinkle with water in the afternoon. All the cuttings of Pelargoniums that can now be obtained should be put in; they will make fine strong plants for keeping over the winter. They will succeed in a bed of light soil in the open ground, but we

prefer to strike them in good light soil in a frame, where they can be protected from heavy falls of rain or thunder showers. Polygalas, and similar hardwooded plants which have done blooming, should be pruned back rather closely, and placed in a cool situation to start again.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Storing Water.—The bright sun and north winds up to the end of the month tried tender crops very much, especially if not long planted. We took the opportunity to dig every piece of spare ground, so as to be ready for planting out more winter stuff as soon as there was likely to be a change, as now so much time in watering would be required, and water itself is becoming scarce with us. In ten days of such weather the supply would be nearly exhausted. At the present time we know of several instances where a house has been built and gardens are being fenced, and the supply of water is only now beginning to be thought of. Where there is near at hand a river, or even a rivulet that does not dry up in summer, or where water is known to be abundant at a few feet beneath the surface, then it is excusable if the water question becomes one of the last to be considered; but it is very different when a large household establishment and a fair-sized garden are to be supplied, and the latter, unlike a field that generally produces only one crop in the season, has to carry many and successive crops in the same ground, and for which successive moisture must be had, and when for the water wanted in both cases you must depend on what can be obtained from some 300 feet below the surface, or what can be saved in ponds and tanks supplied from the clouds.

It used to be an old axiom, that every house, be it cottage or mansion, in ordinary years, had as much rain on its roof as, if saved up, would meet all the water wants of the inmates. It is one of the good signs of the times that water is more plentifully used in households than formerly, and therefore it may be doubted if the axiom would now hold true, even were tanks and reservoirs large enough to hold all the rain water, which we believe is very seldom the case. We know that the rain that falls on greenhouses, even if saved, will not be sufficient for these houses if watering must be resorted to all the year round. Water suitable for garden purposes might, however, generally be secured in plenty, were the rain which falls in heavy thunderstorms, as it did this year, alone on hard gravel walks and courtyards, conveyed and stored up in a large reservoir. With most of our walks this season, several times covered 4 inches deep, the drains all full, and taking away the superfluous water as fast as they could, we could not but think that in these several thunderstorms, besides what found its way through the earth, there was enough fell on hard roads, walks, &c., to have supplied all the watering wanted for one year, if not for two. Our tanks did not fill at all as we expected from these deluging rains, as the spouts could be no more than full, and the water consequently poured over them. It would perhaps be economical to have larger pipes and spouts merely to meet these exceptional downpourings. The simple fact, however, remains that, whether from position or otherwise, where water is scarce and large fertile gardens are wanted, plenty of tanks and reservoirs to husband and preserve for use the rain water, should be calculated upon and considered as essentials for primary expenditure.

We sometimes hear quite enough about the expense of labour in gardens, and the contrast is drawn between one garden and another, though there be no similarity in the succession of crops, and less similarity still as to the water supply. For instance, we have three gardens, in many respects similar, in our mind's eye. In one, for many years all the water that could be obtained to houses, pits, and cropping, came through a small brass tap in a corner, with a small wooden tub beneath it, the tap connected with a pipe from a pond. As nothing but the little tub could be placed beneath this tap, and as every drop of water wanted had to be taken from thence, it need not be wondered that but little was carried, and the first crops were generally the only crops worth looking at, and, if a dry summer set in early, Strawberries generally dried up instead of swelling. We had several times heard the little labour spent on this garden talked about. We always thought there was quite enough, and more than enough, for the produce.

In the second garden, in addition to such a tap there was a tank or two; but the most of the water that was wanted out

of doors was received from this tap or jet, that emptied itself into a good-sized reservoir, and therefore a man could fill his pails or his water-barrow at once. Here watering to keep up a good succession was a serious matter, and most of it had to be done by dragging a water-barrel a hundred yards—a severe undertaking, and making a man glad of other work when he had half a day of it. In this case the single pipe was supplied from a cistern, the water being raised by pump from a pond that seldom failed. If the pond could have been thoroughly depended on it would have been true economy to have raised the cistern, furnished the garden with pipes and small reservoirs, and even with hose to screw on the taps, all of which would soon have been paid out of the labour necessary in dragging the heavy water-barrels.

In the third garden the water is supplied by ram from a stream, which throws it into a cistern at a great height above the level of the garden, and a good supply of pipes, with taps, and a hose to screw on, enable a man to sprinkle water or deluge the ground without any more labour than holding and clenching the hose-distributor. Need there be any surprise that, merely from there being little or no labour with the water-barrel, this third place is well cultivated, and with less expense for labour than the second? Where water can be made to run in pipes, a pipe and a reservoir, even without the screwed hose, which is useless without a fall, would save a great deal of water carrying or wheeling. That this is not more done is entirely owing to the first expense that would have to be incurred. The old proverb is rung in one's ears, "A penny saved is a penny got," independently of facts that prove incontestably that the saving of the penny is often followed by the losing the worth of a shilling.

Tanks.—One little matter here is worth ventilating, and we should be glad to have the opinion and assistance of those who have had more experience than ourselves. Whatever commoner and rougher reservoirs or ponds may be used for general purposes, no plan is so effectual for storing rain or drain water as a tank formed of brick, and the inner layer at least laid in cement, and a casing of cement placed all over it. If the reservoir is large, the walls, instead of being perpendicular, should slope outwards. Rain water is best for all garden purposes. It is best, too, for this purpose when saved in tanks, if the tank is open to the atmosphere; it then always keeps its delightful softness—if possible, becomes softer than when it came distilled from the clouds. There are, however, some objections to these open tanks. For instance, foreign matters will find their way into the water, and despite a green carpeting of the purifying Duckweed, the water will become stale and unpleasant to the sense of smell. Then, again, the cemented walls, at least until thoroughly weatherproof, will be apt to be affected by severe frosts in winter, and it is difficult so to protect the walls as to avoid doing anything to pollute the water afterwards; and, lastly, the room thus wanted for a tank in and about a garden would often be valuable for other purposes, and in some cases if open it would be unpleasant, and might be dangerous if not well secured from children.

Now, to obviate these objections, water as water, in moderate-sized tanks may be kept as well underground as exposed to the air—in fact, in one sense better, because it would not be lessened in quantity by evaporation; but then the great drawback is, that under all such circumstances it will become less or more hard, whether the cement used be the darker Roman or the lighter Portland, and that most likely from the chalk or lime contained in both. Now, here is where the results of practical experience would be most valuable. As far as our limited observation and experience are concerned, we have met with tanks so covered up, one at least so covered, and never cleaned or opened for a quarter of a century, and the water is always pure, clear, and delightfully soft, the clearness being owing to the fact, that little soot or smoke from fires is deposited upon the slates. In another tank underground when the water remains in it for a few weeks it becomes so hard that even laundresses cannot use it without an additional supply of ash ley, or the alkalies generally used to soften the water. These may be judged as extreme cases. The causes of the difference are almost as diverse as the persons from whom they came. One lays stress on the water being conveyed in zinc spouting and iron pipes, and not along lead-covered gutters. A second lays the blame on the cement, says it is poor stuff when compared with what it used to be, and now requires scarcely any sand to be mixed with it. A third insists on using none but the finest rough-washed sand with the cement, from which every earthy particle is excluded—a matter of im-

portance certainly so far as the standing of the cement is concerned; and a fourth says, that in his experience Portland cement is less likely to produce a hardness in the water than Roman cement is. If we have an opinion ourselves, it would have some reference to doing the work well, leaving the walls quite smooth, and patiently waiting until successive supplies of water had absorbed the properties on the outside that give hardness to the water; but then, as if in contradiction of this, we have heard of some cases in which in old-covered tanks supplied with rain water, the water pumped from them is always nearly as hard as if obtained from chalk or a limestone rock. Would practical readers give us the benefit of their experience, so that soft water may be obtained from underground tanks either for household or garden use?

Watering.—This has been confined chiefly to some Cauliflowers and Peas that we wished to continue productive as long as possible, and to crops which we were obliged to plant out, as our crop of Beet, having found in many years that no common netting would save it from the birds when just above the ground. This we have been obliged to shade slightly with evergreen branches, &c., and after watering when planting, as it plants quite as well as Turnips, it had a slight surface sprinkling every day just to check evaporation and prevent the leaves drooping. There is plenty of moisture in the ground for all established plants as yet, and, therefore, for Peas and other crops established the chief work has been to surface-stir the ground with the hoe and light fork to prevent cracks and keep the moisture in; and to promote the latter object we have placed a layer of short grass from the lawn along each side of the rows of Peas, and will do the same with other crops, as Cauliflowers, if the present parching weather should last. This will do little to arrest moist vapour rising from beneath to supply the roots with moisture, and is in every respect better than giving dribblets at the surface, which only encourage surface roots to be dried up by the fierce sun.

Celery planted out had to be watered, and has had several slight sprinklings overhead just to refresh and prevent excessive evaporation until the roots were in good working order. As our water has to be carried chiefly in water-barrels, anything that will dispense with watering is an advantage to us, and much experience leads us to the conclusion, that surface-stirring, mulching, and in fresh-planted subjects a mere sprinkling over the foliage are often better than a deluging with water.

In the pleasure grounds and flower gardens the same principle is more rigidly applied as respects watering, as up to this time it is important that the soil should become warm as well as be moist enough. Watering has, therefore, chiefly been confined to plants that were evidently beginning to suffer, chiefly those of small size and freshly planted; and to these only as much was given as would moisten the soil around the roots. Provided there was plenty of moisture and yet there was a tendency to droop from the want of reciprocal action between roots and perspiring foliage, a little shade, or, what is given more quickly, a slight dash over the foliage from the syringe would be more useful than watering at the roots, and if the surface of the ground is warm from the action of the sun's rays, what water falls on the ground is speedily raised in agreeable vapour about the foliage of the plant so operated upon.

The great rule in watering plants out of doors or in-doors is to water so liberally as to reach all the fibres of the plants, and then to wait until the plant needs a repetition of the supply. There need be no difficulty with established plants. They generally indicate to those who tend them what they want, if the cultivator will observe and seek for the information, instead of treating them to the water-pail as a work of mere routine.

Fresh-turned-out plants, if they are moist enough at the roots, and yet the foliage droops in a bright sun, will be more benefited by arresting evaporation at the surface than by fresh watering at the roots. Most people dread moistening a leaf in sunshine, but out of doors especially. We have seldom, we might say never, saw any bad effects from the practice. At any rate, scarcity of water has taught us this—that the very free use of water in general is not an unmixed advantage. Watering may easily be overdone. We have several times been disappointed at finding no such extraordinary results either in kitchen or flower gardens where a frequent copious watering from the hose was resorted to. It is a great advantage, however, to be able thus to water with little trouble when necessary. In the flower garden as yet, with the exception referred to, we have depended chiefly on surface-moving to secure the

necessary moisture for the roots, with the exception of Calceolarias, which have had a little watering at the roots. In other departments the work has been the same as detailed in previous weeks' notices.—R. F.

COVENT GARDEN MARKET.—JULY 3.

Our market is exceedingly well supplied, with forced fruits especially so. In consequence prices are lower and have a downward tendency. Foreign produce includes Green Gage Plums and several other varieties, also a considerable quantity of fresh figs. Good samples of Potatoes and Peas are freely offered at lower rates.

FRUIT.											
	s.	d.	a. d.		s.	d.	a. d.		s.	d.	a. d.
Apples ½ sieve	3	0	4	0	Melons..... each	3	0	to 5	0	0	0
Apricots doz	3	0	4	0	Nectarines doz.	0	0	10	0	0	0
Cherries lb.	0	6	1	6	Oranges 100	8	0	14	0	0	0
Chestnuts bush.	0	0	0	0	Peaches doz.	8	0	21	0	0	0
Currents ½ sieve	3	0	4	0	Pears (dessert) .. doz.	0	0	0	0	0	0
Black do.	4	0	5	0	kitchen..... doz.	0	0	0	0	0	0
Figs doz.	3	0	6	0	Pine Apples lb.	4	0	7	0	0	0
Filberts lb.	0	0	0	0	Plums ½ sieve	0	0	0	0	0	0
Cobs lb.	0	9	1	0	Quinces doz.	0	0	0	0	0	0
Gooseberries .. quart	0	4	0	6	Raspberries lb.	0	6	0	8	0	0
Grapes, Hothouse.. lb.	2	6	0	6	Strawberries lb.	0	6	2	0	0	0
Lemons 100	8	0	12	0	Walnuts bush.	10	0	20	0	0	0

VEGETABLES.									
	s.	d.	a. d.		s.	d.	a. d.		
Artichokes each	0	3	to 0	6	Leeks bunch	0	3	to 0	4
Asparagus bundle	1	6	0	6	Lettuce... per score	1	0	2	0
Beans, Kidney, per 100	1	0	2	0	Mushrooms pottle	2	0	8	0
Scarlet Run. ½ sieve	0	0	0	0	Must. & Cress, punnet	0	2	0	0
Boet, Red doz.	2	0	8	0	Onions per bushel	4	0	5	0
Broccoli bundle	2	0	3	0	Parsley per sieve	3	0	4	0
Brns. Sprouts ½ sieve	0	0	0	0	Parsnips doz.	0	9	1	0
Cabbage doz.	1	0	1	5	Peas per quart	0	6	1	0
Capsicums 100	2	0	3	0	Potatoes bushel	4	0	6	0
Carrots bunch	0	6	0	8	Kidney do.	6	0	10	0
Cauliflower doz.	3	0	6	0	New lb.	0	3	0	0
Celery bundle	1	0	2	0	Radishes doz. bunches	0	9	1	0
Cucumbers each	0	6	1	0	Rhubarb bundle	0	4	0	0
Pickling doz.	0	0	0	0	Savoy doz.	0	0	0	0
Endive doz.	2	0	0	0	Ses. kale basket	0	0	0	0
Fennel bunch	0	8	0	0	Shallots lb.	0	8	0	0
Garlic lb.	0	8	1	0	Spinach bushel	2	0	3	0
Herbs bunch	0	3	0	0	Tomatoes... per doz.	3	0	4	0
Horseradish .. bundle	2	6	4	0	Turnips bunch	0	6	0	0

TO CORRESPONDENTS.

*. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

GUIDE TO BURY ST. EDMUNDS (*An Intending Exhibitor*).—We recommend you to send to Messrs. Jackson & Frost, Booksellers, Bury St. Edmunds, for "Jackson's Guide to Bury." There is in it an excellent plan of the town, and of the show-wards. We suppose you can have it free by post if you enclose to them twelve postage stamps.

Tobacco Powder (*Subscriber, Bolton*).—It was advertised by two manufacturers in our Journal last week.

VINERY ARRANGEMENTS (*Anxious to Learn*).—Your ventilation will do very well. The best Vines for early work and moderate heat are Black Hamburg, Dutch Sweetwater, Buckland Sweetwater, and Royal Muscadine. For more heat you may have the Muscats. We approve of your planting inside, and allowing the roots to go out if the border is to be protected. We would for quick returns, plant from 2½ to 3 feet apart, if the house is to be used solely for Vines. If you are to have crops beneath them, then you would need to have them 4 feet apart, and as to distance it makes but little difference whether you manage the Vines on the spur or long-rod system. The long-rod made generally gives the best bunches; but as a rule the spur system matures them rather better. There is no necessity for having the boiler and pipes done at the same time as the house is being built, but it is often best to finish all at once. There is no necessity for pulling down the back wall in any case. Your stovehole and boiler may be placed outside the wall, and do not be afraid to place the boiler low enough, and all the disturbance to the wall would merely be the holes to let the pipes pass. Some people like the boiler to be inside of the house; but little is gained by that if set in the usual way. It is no bad plan, however, to build a little chamber over the furnace and boiler, and have holes from the chamber to the house so as to economise the heat that rises above the boiler. For common purposes we consider iron-fitting joints and joints made with lint, rope yarn, and red lead as good as any. Were we putting down pipes that we should wish to take up easily, then we would use the Tins system. All the systems advertised in this Journal will answer well if well done. We are sure that we could work each of them satisfactorily. As to boilers, we have just one prejudice—we like simplicity; and, provided they are as simple as possible, we care little whether the shape be saddle-back, conical, or tubular.

CUPRESSUS LAWSONIANA VARIEGATA (F. F.).—Send it to the Floral Committee of the Royal Horticultural Society the day before one of their Tuesday meetings, writing at the same time to the Society's Secretary stating your wishes.

FORCING OF STRAWBERRIES A SECOND YEAR (*A. B.*).—We have often forced Strawberry plants a second season, more especially when there was a difficulty in obtaining early runners. We used to let the plants rest a little in their pots, giving them little water, and a rather shady place for a month or so, then strip off some of the worst leaves, shake away a good portion of the soil, repot in fresh, and then treat as for young plants. The results, which we used to have, on the whole were these:—Generally heavy crops, but the individual berries scarcely so fine as in the case of young plants. This thinning is what some of us cannot overlook, and so the best fruit without thinning goes to table and the smallest to the kitchen for creams, &c. The chief difference as to results is that the old plants yield the heavier crop, and the young the finer fruit. As you go north there are more old plants used. Small autumn runners are also often picked out in a bed, and, after standing the winter, are taken up in the following summer and potted.

HEATING A GREENHOUSE FROM A KITCHENER (*A Young Gardener*).—We might answer your inquiry better did we thoroughly know what you mean by the word "kitchener." We consulted our *artiste* at the kitchen, who showed us a rather large iron vessel, with a lid, for placing the water in, and with a brass tap in front for drawing it off, which, when placed over the oven at the side, or over the fire with a moveable hob, will always give a supply of hot water when needed. Those "kitcheners" are used in public-houses for supplying clean hot water to mix with something stronger. Now, such a kitchener so placed that it could be heated at pleasure, and yet be fixed in its position, would be quite sufficient to keep the frost out of a house on the other side of a wall, 50 feet long by 7 feet wide. What you would want would be two holes, one within 3 inches of the top, and one within an inch of the bottom, and each drilled to receive one-inch pipes to go through the wall, and there be joined by a socket-joint to three-inch pipes to bent the house, two of which, if the house is not lofty, would do; but if 12 or more feet in height at back, three would be better. In such a case, however, the water in the boiler must always be as high as the top pipe, and the pipes in the house should neither be higher nor lower than those small pipes that come at once from the boiler. The water will not circulate well if taken at all below the level of the kitchener, and it must not go higher if it is supplied with a moveable lid. If the kitchener has a close lid, and is supplied by a small pipe from a greater height, the hot-water pipes may go as high as the supply cistern. Altogether the kitchener, or what we describe as such, will not answer so well and with so little trouble as a boiler at the back of the kitchen range. Even in such a case the matter of levels must be considered as stated above. We were in hopes we could heat a long glass corridor from a large kitchen range; and it could have been done easily but for the fact that the kitchen-range is considerably higher than the floor of the place to be heated, and for particular reasons, such as doors, &c., it was necessary that the pipes should not be higher than merely placed on the stone flooring. Such a house as yours will also be helped by the kitchen chimney; and this would be done more effectually if near the fire-place the wall was made thinner, or if an arch of 2 or 3 feet was made, and an iron plate inserted instead of brickwork. Such a kitchen chimney will give out a great deal of heat. If the kitchener or boiler should be too troublesome, we would recommend an iron stove of the kind mentioned at page 440.

REMOVING LEAVES OF STRAWBERRIES (*A Learner*).—We would not remove luxuriant leaves from Strawberry plants whilst swelling their fruit; but if you think they are rather too strong, apply next season a little dry litter on the surface instead of dung.

ROSES FROM CUTTINGS (*A Lady*).—The best time to propagate Roses from cuttings is immediately before the flowering is past. Any shoots that have bloomed are sure to have the wood sufficiently ripened, or any shoots of an equal age with the flowering shoots are eligible for cuttings. The cuttings, therefore, should be taken from the wood of the current year, and the time to take them is immediately after that of blooming. The cuttings may be from 4 to 6 inches in length, and have three or more buds—eyes or leaves. The base of the cutting should be cut off with a sharp knife transversely below the lowest bud or leaf, the leaf being removed, and the leaf next above, or for a distance of two-thirds the length of the cutting. The cuttings are to be inserted singly two-thirds their length in pots, in a compost of equal parts of sandy loam and silver sand, the pots being well drained, resting the base of the cutting on the drainage. They may then be placed in a cold frame, keeping them close, and sprinkled with water every morning, shade being afforded them by means of a covering of mats. It will suffice if the cuttings have two joints, one being inserted in the soil; but it is better if they have three, two inserted in the soil and one out. Cuttings will also strike in the open ground, but they should not be put in until the middle of September, and a warm exposure should be chosen. Cuttings put in in a frame will be well rooted in six weeks, when they must have air and be repotted.

AZALEAS AFTER BLOOMING (*South Croydon*).—These should be kept under glass and encouraged to make new growth by a rather close and moist atmosphere, and that should be maintained until the growth is complete, and then it is not desirable to plunge them in the shade, but to keep them in a light, cool, airy house. If the plants were potted last year (and they do not appear pot-bound), we would not recommend a shift. If you do repot them, a compost of two-thirds peat and one-third turfy loam with one-sixth of silver sand, will grow them well.

MELON (*J. Doublby*).—It is impossible to name a Melon from the seeds.

EGLANTEINE (*J. Malcolm*).—What plant was meant by "Eglantine" by ancient writers has been disputed, but we are of opinion that they so named what we term the Sweet Briar. Shakespeare puts into the mouth of Oberon the lines—

"I know a bank whereon the Wild Thyme blows,
Where Ox-lips and the nodding Violet grows;
Quite over-canopied with luscious Woodbine,
With sweet Musk Roses, and with Eglantine."

So the Eglantine could not have been the Woodbine as some suppose, and in "Cymbeline" the same poet speaks of the sweet perfume of the Eglantine's leaves. Old Gerard says—"Eglantine, that is Sweet Briar," and Turner, a still older herbalist, calls it "Eglantine, or Sweet Brere."

APPLE TREE IN PIGGERY-YARD (A. A.).—It is not unlikely that the Apple tree will be destroyed in time by the saturation of the soil with the urine and washings of the dung; but it will not suffer so long as the ground is not excessively charged with these matters.

AFTER-USES OF PIT EMPLOYED FOR CUTTINGS (Fred).—You may put a barrowful of hot dung under each light, and cover it with 9 inches of fresh loam; plant under each light a strong Cucumbers plant. You may therefore grow Cucumbers, and had it been thought of sooner you might have had a crop of Melons. The frame may also be employed for striking cuttings of such plants as *Verbenas* for furnishing other cuttings in spring, which should be put in early in August.

REMOVING BALSAM BUDS (J. Bowthby).—To have the plants in full flower at the beginning of August the buds should not be pinched off after this, but they may be thinned, which will increase the size of the blooms left.

MELONS NOT SETTING (A County Cork Gardener).—We I-s-r you have neglected to thin out the shoots, so that they are much too close together, and being thus deprived of light and air the blossoms do not open freely. The watering should be in proportion to the growth, and excessive vigour lessened by reducing the watering and giving abundance of air.

We presume you have stopped the shoots and laterals, and also thinned them. Do it now if you have not, and take out the point of each lateral at one joint above the fruit. If you do this and give air early in the morning we think the fruit will set.

EARLY PEAS SOWN IN AUGUST (Idem).—If you sow early Peas early in August they may, if the season be mild, come into bearing in November; but their produce would be better insured were they sown in the second week in July, which we think quite late enough.

NAMES OF PLANTS (B. D.).—1, *Adiantum microphyllum*; 2, *Pteris caerulea*; 3, *Adiantum capillus-Veneris*; 4, *Aspidium filicatum*; 5, *Asplenium filicatum*; 6, *Pteris*; 7, *Scolopendrium vulgare*; 8, *Lastrea dilatata*; 9, *Athyrium filix-femina*; 10, *Lastrea filix-mas*; 11, *Polypodium vulgare*; 12, *Pteris serrulata*; the shrub is *Leycesteria formosa*. (W. F. R. and J. D. D.).—*Stachys lanata*. (B. W.).—*Cystopteris fragilis*. (A Constant Reader, H.).—1, *Rhus coccinea*; 2, *Colutea arborescens*; 3, *Pyrus intermedia* (?); 4, *Spiraea filipendula*; 5, *Symphytum officinale*. R. G.).—1, *Philadelphus coronarius*; 2, *Lonicera involucrata*; 3, *Pergularia odoratissima*. (A Constant Reader).—1, *Erigeron speciosum*; 5, *Spiraea chamaedrifolia*; 1, *Tradescantia virginica*; we cannot name the garden hybrid *Roses*. (A Subscriber).—Both the Willows are forms of *Salix nigricans*, and the Fern is *Cystopteris fragilis*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending July 2nd.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 26	30.486	30.468	74	37	62	59	N.E.	.00	[Cold and dry; very clear; very fine at night. Quite cloudless; clear with dry air; very fine. Overcast; low dusky white clouds; very fine. Clear and cloudless; very fine; cloudy. Hot; very fine throughout. Hot with slight dry haze; hot and dry; cloudy. Close and warm; showery; fine rain at night.
Thurs. 27	30.522	30.419	82	40	61	59	N.E.	.00	
Fri. . 28	30.502	30.474	70	35	63	59	N.E.	.00	
Sat. . 29	30.468	30.273	80	42	62	60	S.W.	.00	
Sun. . 30	30.079	29.800	82	47	63	60	S.W.	.00	
Mon. . 1	29.819	29.738	83	44	64	60	E.	.24	
Tues. . 2	29.735	29.664	71	55	65	61	W.	.04	
Mean	30.221	30.126	77.43	42.85	62.85	59.71	..	0.28	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

GAME FOWLS.

In breeding in-and-in much depends upon the constitution of the brood stock, and putting youth to youth. There should be no hidden taint of disease in the birds selected for breeding purposes. They should have every feature of good health; indeed, success is mainly attributable to the health and vigour of the brood stock. By strict attention to these rules one may breed for years with success from the same stock; and when a cross is introduced let one that is equally healthy and good be chosen; but once let the seeds of disease be sown, and it will be found they will not be easily eradicated.

We are all more or less prejudiced in our tastes and opinions; and although I have every respect for "NEWMARKET'S" views as to the form of the Game cock's tail, I still strictly adhere to previously expressed remarks.

I believe that, as a rule, old cock-fighters preferred the spurred hen; but, as I have stated before, I can perceive no real merit in the appendage. I have seen several spurred black hens. The two I alluded to in my previous letter were both equally good, perhaps the spangled hen was the baster and quicker fighter. I have often seen when a lad young broods from these hens, hatched in the early months of February and March, skitting and running about during the frost and snow, indifferent to the inclemency of the weather. Naturally healthy and vigorous, they were not so susceptible to the changes of temperature as the young broods of the present day. How mortifying it is, after all our hopes and care, to have to witness the defective and shattered constitution of our brood, in a few days after their release from the shell drooping and dying without apparent cause. These are great drawbacks in breeding, and deprive the pursuit of one-half of its interest. I fear that a great portion of our exhibition stock is tainted with disease, and the birds thus hand it down to their off-spring.

In regard to the colour of the "Shacbags" opinions vary. Some parties assert that they were a Black-breasted Red with wheat-coloured or Partridge hens; others say they were Black-breasted Yellow Duckwings. Mr. Richardson in his book on domestic fowls, page 23, states that the "Shakebag," or "Shackbag," would appear, from the description of Dixon and other writers, to have been an offshoot from the great Paduan or St. Iago fowl, and the immediate descendant of the *Gallus giganteus*. This Paduan fowl was described by Ulysses Aldrovand as having five colours—viz., black, white, green, red, and yellow; the body black tinged with green, and the tail of the same

colour, with the base of the feathers white. I have seen several in Yorkshire which were pointed out to me as "Shacbags." They were Black-breasted Reds with Partridge hens, and had small double combs. Several of these were fought, and they were deep Game.

If I am not mistaken, Mr. Aykroyd, of Bradford, bred both the birds that were exhibited by Mr. Brierley at Accrington, and I believe they are descended from Messrs. Scrimminger and Williams's stock. I thought the Black-breasted Red at the Accrington Show the best I ever saw, being particularly neat in all his points, and devoid of that coarseness and legginess which we should at all times discard. The Brown-breasted Red is equally good, but was much out of condition—indeed, he ought not to have been shown. He has splendid feet, with a good back claw, and is rich in colour. The birds I have seen belonging to Mr. Statter were good, but I fancy they are partially from Mr. Scrimminger's stock.

I believe Mr. Brierley's Black-breasted Reds have had a cross of Brown Red at some period; indeed, I have a Partridge hen which came from Mr. Williams's yard, and she has dark eyes, and occasionally throws the cockerels blotch-breasted Reds. I do not know Mr. Scrimminger personally, but believe he breeds excellent birds both for exhibition and the pit.

I have seen some of Mr. Shield's Black-breasted Reds with yellow legs, and splendid short-feathered birds they were, very showy, and good fighters. Few breeders in Yorkshire formerly were so cautious in crossing so as to produce birds regular in feather and attributes. Whatever may be the courage and soundness of constitution of the birds bred for exhibition purposes at the present time, every one must admit that at no period were they ever bred more uniform in colour and feather.

Some thirty or forty years ago there was a favourite breed in Yorkshire, but which is now rarely seen. It was a Black-breasted Red with a very deep red hackle, back, and saddle, dark beak, and legs; the ends of the wings, instead of being of a clear bay, were black. The birds were also very black beneath the hackle when clipped for fighting, and from this colour they established the name of Black Hackles.

In Craven, Yorkshire, a favourite breed of White Game fowl with white beak and legs was much appreciated; the owner bred these fowls with great care, and was very successful. He had also a favourite breed of Black-breasted Reds from wheat-coloured hens; and amongst other kinds which are now, as formerly, in great favour, are Gingers with yellow and willow legs, Dark Reds with clear brown breasts, Black-breasted Duckwings with yellow and willow legs, Spangles, and a few Piles, Blacks and Furnaces. The streaky-breasted Brown Reds which are now exhibited by Yorkshire breeders, I imagine were in-

troduced into this county from Worcestershire, Staffordshire, and Leicestershire. We have also had a few from near Newmarket, bred by a gentleman of the name of Cobden. At Bradford, Halifax, and in their vicinities, no doubt the best birds for exhibition purposes are produced; but for the pit there are many other localities where good birds are bred.

The late Earl of Mexborough had a breed of Black-breasted Reds with wheat-coloured hens, but I believe the Duckwings stood higher in his favour. Numbers of these were bred and fed in the vicinity of Halifax for the earl, by a man of the name of Holdsworth.—YORKSHIRE.

THE CLASHING OF EXHIBITIONS.

It needs little reflection on the part of any one at all conversant with poultry exhibitions to account for the occasional partial success of a number of them. Under present arrangements no other result could possibly ensue, for so long as two, three, or in some cases even four shows are being held simultaneously, neither first-rate specimens of poultry, a large attendance of poultry amateurs as visitors, nor a selection of arbitrators to award the society's prizes, can with any degree of certainty be insured at any one of them. The well-doing of the whole is affected, and not unfrequently have exhibitions from this cause, and this alone, been entirely done away with. It is a suicidal act, to say the best of it, for committees to hazard their success by an obstinate determination "to carry out their individual show, whether others do so" (at the same time) "or not;" and we have known many grievous disappointments, and much loss of means, that every after-care could not make good, thus to result, and society after society has inevitably fallen to decay. This might with but little forethought be entirely avoided, for if committees as soon as the day was fixed would give an early intimation of the date at which they propose to hold their meetings, nothing less than a most discreditable rivalry would cause other committees to appoint their respective exhibitions on the days already selected, and the columns of *THE JOURNAL OF HORTICULTURE* are always open to the early promulgation of the information above referred to.

Another great obstacle to general success is the practice of many committees to leave the appointment of judges to the last moment, that their names may not transpire before the meeting. That benefit can in any case arise from this mode of action seems to us exceedingly doubtful; but this we know, that in many instances to which we could refer, either the parties thus invited have been away from home at the moment, or some family arrangement has prevented immediate acceptance when they have been so unexpectedly requested to officiate. In this difficulty, at the outset so easily provided against, the telegraph is at once called into requisition, sometimes with success, but as frequently with renewed disappointment; a haphazard judge is obtained, and it is easily appreciable that uncertainty throughout is imminent. Managing committees cannot do better than reflect on what we have thus advised; for "to be forewarned is to be forearmed" against these difficulties.

BRAHMA POOTRAS PERHAPS OF AFRICAN AS WELL AS ASIATIC ORIGIN.

I HAVE obtained a few further notes on Brahma Pootras which may be interesting. Whether wholly correct or not, they are certainly correct in part. "At Rio de Janeiro or St. Sebastian, the capital of the empire of Brazil, there are many Malays to be found, both of the Red and Grey or rather Birchen breeds. Birchen Brahmas are also to be found in the environs of this city without vulture hocks. (Shape of comb is, however not given). Reddish brown and Partridge birds of the Brahma type, as well as those of a darkish cinnamon, are to be found in this locality, though not so commonly as the Malays."

"The writer of these notes inquired where both those breeds, Malays and Brahmas, came from originally, and was answered that they were brought to 'Rio,' in the slavers and trading vessels from the west coast of Africa, and a few from the Mozambique country on the east coast of Africa; that they both were the common fowls of those coasts, and were to be found at Sierra Leone as well, which is a British possession, and that the southern United States obtained both breeds in the same manner, as did the West Indian Islands. The fowls being thus imported into the Southern States of the Union, will account for their being also found in the Northern States of

America. The Birchen Grey colour often predominates over the Red in the Malays there, and almost always in the Brahmas; but when found wild the red cocks and brown hens prevail."

Thus we have an African origin for Malays and Brahmas, and, perhaps, Cochins or Shanghaes also, as well as an Asiatic origin! As to their wild type in Asia, the *Gallus giganteus* is undoubtedly that of the Malays, being thick-combed, and in colour like the reddish Malays. Brahmas and Cochins may have descended through the Malays from *Gallus giganteus*; but some deem the Partridge Cochins to have been the source from which their whole tribe have sprung, including Brahmas. If Malays gave rise to the Brahmas, the pea-combs are easily accounted for, though they would have descended through the Cochins or Shanghaes. If the Brahma should be found to be the African bird, as the Cochin is the Asiatic bird of this tribe, any little difference between them which may exist would be easily recognised as coming from different continents originally.

I should have said in my last note on Brahmas, that the Dorking cross would give too long wings to Brahmas. I have not seen any Dorking-crossed Brahmas at any of the exhibitions I have visited.

If pea-combed Brahmas have any claim to a distinct origin, I think it will rather be as African than as Asiatic birds—that the pea-combed are of African, and the single-combed of Asiatic origin—but it appears they are much mixed with Malays wherever found.—TREVOR, OTHERWISE NEWMARKET.

BEVERLEY POULTRY EXHIBITION.

THE tenth annual Exhibition in connection with this Society took place on June 26th. The day throughout was most auspicious, and the arrangements, under the personal management of the active Secretary of the Show, left not a single matter undone that the most anxious proprietor of competing poultry could desire. The fact was, the Secretary, Mr. Harry Adams, so well known among our poultry amateurs, aided by his own poultry man (Briley), took the whole charge and management of the poultry, and thus without a single mistake or mishap everything was carried through to the most satisfactory conclusion.

It is a matter of pleasure to us to record, that never has there been a case brought under our notice in which a show throughout has been held where all the pens have been so excellent; and we can with perfect confidence assure our readers that, with the exception of the Grey Dorkings, there was not a class that could have been selected at Beverley that would not have done honour even to the largest of our poultry exhibitions. It is a difficulty to assign any reason why there should have been this year so great a falling-off in this one particular class, as the Grey Dorkings at Beverley have heretofore been one of the most conspicuous breeds represented. This year, however, the deterioration was so sad, that had not the Committee most generously determined that "every prize on the schedule should be given," to keep perfect faith with exhibitors, no doubt a portion at least of the Grey Dorking premiums would have been withheld altogether. The Game classes were such as are very rarely equalled; in fact, all the great guns among Game breeders seemed to have reserved their best pens of Game birds for the Beverley Show. Mr. Jas. Fletcher, of Stoneclough, took the silver cup for the best pen of Game (Any variety) exhibited, with a Black Red cock, that was the admiration of every one, supported by a beautiful Brown Red, taking second prize also in the same class. The condition of these birds was perfection itself, and proved beyond question the great attention that must have been bestowed upon them in their general management. Mr. S. Matthew, of Stowmarket, was also represented by several wonderfully good pens of Game fowls, and the united opinion of all Game breeders present was that, the best Black Red hen ever exhibited was the property of this gentleman in pen 6. Whether viewed for brood purposes or for exhibition we must certainly give most unequivocal support to this general opinion. The Duckwings were especially good, and mostly very true to feather. Spanish fowls were well shown; but many of the best pens were suffering from too frequent exhibition. It should be borne in mind by owners, that Spanish fowls appear far more susceptible of injury from this cause than most other varieties of poultry. Cochins were shown that have rarely been excelled, the Partridge-coloured ones being the recipients of the principal prize—a silver cup. In *Hamburghs* Mr. Beldon carried all before him, taking the first prizes in all four varieties, consequently inevitably securing the silver *Hamburgh* cup, though a great deal of time was wasted in the final determination of this cup premium, from the fact of the whole four pens being of extraordinary excellence, and of course unknown to the Judge as being the property of one single exhibitor. *Polish*, though few, were very good.

We now come to Game *Pontants*, of which the display was unusually good. We regret to have to record a piece of deception revealed in this class that, once discovered, brought down immediate disqualification on undoubtedly by far the best pen exhibited. In case of a quickly judged show it is more than probable the discovery would not have

ensued, as the matter was carried out with a practical carefulness that would elude any but the very closest inspection of the Judge, by handling out of the pen. The principal tail feather of the cock had been stitched together very artistically close to the roots of the feathers, and so neatly as to cause not any inconvenience or expression of discomfort to the bird itself whilst viewed in the pen. Our readers may form a very ready conception of this unpleasant affair, from a jocose remark of a bystander, that "this cock must have surely belonged to a venetian blind manufacturer." It did not, however, but was the property of Mr. Crossland, of Wakefield. It is really a matter worthy of consideration, whether the lustre of former successes is not materially dimmed by the tarnish of such an exposition; independently of the acknowledged fact that not only, if fairly shown, would this pen of Game Bantams have won first prize in their own class, but in every probability the silver cup as well for the best pen of Bantams exhibited. Even as it was, the same owner took first prize with another very excellent pen in the same class, quite outstripping all other competitors. Some very truly bred Cochins Bantams were the cup-winners, and both White and Black Bantams were good and in capital feather. Mandarins, Carolinas, and Pintail Ducks were to be seen in first-rate breeding plumage, which is a very remarkable circumstance so late in the season.

The Pigeon classes were of the highest character, and the show of German Toys was most unprecedented. A pen of the real American Passenger Pigeons were public favourites, but their unceasing efforts for liberty detracted much from the pleasure of inspection.

As before noted, the day being so very fine, the attendance was unusually good.

GAME (Black-breasted or other Reds).—First, S. Matthew, Stowmarket. Second, J. Fletcher, Manchester. Highly Commended, H. M. Julian, Hull; J. Fletcher; S. Matthew; J. Barrow, Kendal; J. Watson, Knaresborough.

ANY OTHER VARIETY.—First, S. Matthew. Second, J. Fletcher. Highly Commended, W. Boyes, Beverley; J. Fletcher; Rev. W. J. Mellor, Colwick Rectory, Notts.

GAME COCK.—First, Cup and Second, J. Fletcher. Highly Commended, S. Matthew; E. Ackroyd, Bradford; J. Barrow, Kendal; C. W. Brierley, Middleton; Rev. A. G. Brooke, Rington; C. Challoner, Whitwell, Chesterfield. Commended, R. Foster, Beverley.

SPANISH.—First and Cup, J. Thresh, Bradford. Second, E. Jones, Bristol. Highly Commended, Messrs. Birch & Boulter, Sheffield; J. W. Cannon, Bradford. Commended, J. Marchant, Halifax.

DORKINGS.—First and Cup, H. Lingwood, Needham Market. Second, J. W. Harrison, Spalding.

COCHIN-CHINA (Cinnamon or Buff).—First, R. White, Sheffield. Second, C. W. Brierley. Highly Commended, W. A. Taylor, Manchester; R. Mapplebeck; Mrs. R. White, Sheffield; H. Lingwood; Messrs. Gannon and Jefferson, Whitehaven; G. Shimpson, Leighton Buzzard, Beds; H. Beldon, Bingley.

COCHIN-CHINA (Any other variety).—First and Cup, E. Tindman, Whitechurch. Second, Rev. W. J. Mellor. Highly Commended, J. Stephens, Walsall; C. W. Brierley; J. W. Harrison.

HAMBURGERS (Gold-spangled).—First and Cup, H. Beldon. Second, J. White, Wakefield. Highly Commended, Messrs. S. & R. Ashton, Mottram, Cheshire; J. Walker, Knaresborough. Commended, Messrs. Birch and Boulter.

HAMBURGERS (Silver-spangled).—First, H. Beldon. Second, A. K. Wood. Highly Commended, J. Walker; J. Fielding.

HAMBURGERS (Gold-pencilled).—First, H. Beldon. Second, T. Wrigley, Tong, Middleton. Highly Commended, S. Smith, Halifax.

HAMBURGERS (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, Skipton.

POLISH.—First, H. Beldon. Second, Miss E. Proctor, Hull.

POLISH (Any other variety).—First, R. Loft, Woodmansey. Second, Col. Stuart Wortley, London. Highly Commended, Rev. G. Hustler, Stillingfleet, York; J. W. Harrison.

GAME BANTAMS.—First, E. Crossland, Wakefield. Second, Rev. W. J. Mellor. Highly Commended, J. R. Robinson. Commended, W. Mabon, Jedburgh.

BANTAMS (Any other variety).—First, H. Beldon. Second, W. A. Taylor. Highly Commended, T. Harrison; J. R. Jessop.

GAME BANTAM COCK.—First, J. Fletcher. Second, E. Crossland. Highly Commended, C. W. Brierley.

DUCKS (Aylesbury).—First, E. Leech, Rochdale. Second, Messrs. Bowman & Ferns, Whitehaven. Highly Commended, J. W. Harrison, Spalding. Commended, J. W. Harrison; O. A. Young, Driffield.

DUCKS (Rouen).—First, E. Leech. Second, J. W. Harrison.

DUCKS (Any other variety).—First and Second, T. C. Harrison, Hull. Highly Commended, J. W. Harrison.

PIGEONS.

CARRIER.—Cock.—First, J. Hawley, Bingley. Second, J. Thackray, York. Third, J. Firth, Dewsbury. Highly Commended, R. H. Artindale, Liverpool; J. Hawley; R. Bellamy, Leven; H. Yardley, Birmingham; R. Fulton, Deptford; E. Brown; C. Bulpin. Commended, J. Firth, Dewsbury. Hen.—First, R. Fulton. Second, E. Horner, Harewood, Leeds. Third, J. Hawley. Highly Commended, J. Thackray; J. Firth, jun.; T. C. & E. Newbitt, Epworth, Bawtry; H. Yardley; R. Fulton; J. W. Harrison; C. Bulpin. Commended, R. Bellamy; J. Firth, jun.; H. Yardley; J. W. Harrison.

POINTER.—Cock.—First, C. Cowburn, Leeds. Second, R. Fulton. Third, W. Watson, Beverley. Highly Commended, J. Thackray; C. Cowburn; E. Brown, Sheffield. Commended, J. Hawley; C. Bulpin. Hen.—First, E. E. M. Roysds, Rochdale. Second, J. Hawley. Third, R. Fulton. Highly Commended, J. Key, Beverley; C. Cowburn; T. C. & E. Newbitt; R. Fulton; C. Bulpin.

TUMBLERS (Almond).—First, F. Key. Second, C. Cowburn. Third, J. Ford. Highly Commended, J. Ford; J. Thackray; H. Yardley; J. Fielding; R. Fulton.

TUMBLERS (Any other variety).—First, R. Fulton. Second, J. Hawley. Third, J. Ford. Highly Commended, J. Hawley; J. Thackray; C. Cowburn; C. Lythe, Cottingham. Commended, J. Thackray; T. Statters.

BARBS.—First and Second, J. Thackray. Third, E. Horner, Harewood. Highly Commended, H. Yardley; R. Fulton. Commended, E. Brown.

OWLS.—First, R. Fulton. Second and Third, J. Fielding. Highly Commended, H. Yardley; C. Bulpin.

FANTAILS.—First, T. Ellington, Woodmansey. Second, J. Hawley. Third, C. Cussons. Highly Commended, H. Yardley; T. C. & E. Newbitt; J. W. Edge, Birmingham. Commended, H. Yardley.

JACOBIANS.—First, E. Horner. Second and Third, J. Thompson, Bingley. **TRUMPETERS**.—First, E. Horner. Second, C. Bulpin. Third, H. Yardley.

TURBITS.—First, J. Marshall, Driffield. Second, C. Bulpin. Third, J. Thompson. Highly Commended, R. Patterson, Melrose; H. Yardley.

NUNS.—First, J. Marshall, Driffield. Second, C. Bulpin. Third, J. Thompson. Highly Commended, Rev. A. G. Brooke.

DRAGONS.—First, E. Taylor, Newland. Second, J. Hawley. Third, E. E. M. Roysds. Highly Commended, J. Thompson; C. Cowburn; J. W. Edge. Commended, H. Yardley; E. E. M. Roysds.

ANY OTHER VARIETY.—First, F. Broemel. Second, C. Bulpin. Third, J. W. Thompson. Highly Commended, J. Thackray; H. Yardley; T. Statters; E. E. M. Roysds; H. Yardley; R. Fulton; J. R. Jessop; F. Broemel. Commended, J. Thackray; F. Broemel.

SELLING CLASS.—First, F. Broemel. Second, H. Yardley. Third, J. W. Thompson. Highly Commended, J. Hawley; R. Bellamy; H. Yardley; E. E. M. Roysds. Commended, J. Hawley; J. Thompson; F. Broemel.

CANARIES.

BELGIAN.—First, G. Grant, Beverley. Second, J. Kelly, Beverley. **BELGIAN** (Marked).—First, J. Wood, Beverley. Second, P. Tritschler, Beverley.

ANY OTHER VARIETY.—First and Second, G. Grant. **NEST OF YOUNG CANARIES** (clear).—First, J. Downs, Beverley. Second, G. Grant.

NEST OF YOUNG CANARIES (marked).—First, J. Burton, York. Second, J. Downs, Beverley.

MELE.—First, G. Grant. Second, J. Camper, Beverley. **REDCAP**.—First, J. Kelly. Second, J. Camper.

Edward Hewitt, Esq., of Birmingham, judged the poultry; and Dr. Boulton, of Beverley, fulfilled the same duties in the classes for Pigeons.

POULTRY SHOW AT BRIGHTON.

THIS is an age of shows, and we are not sure that poultry did not inaugurate them as the events of yearly occurrence at the same place. It is more than twenty years ago that one was held at the Zoological Gardens, and they have gone on ever since; but in twenty years a new generation springs up, and brings its new ideas into the management. In some cases dogs and horses lend their attractions. In others, as at Salisbury and Brighton, the fine arts are enlisted. Pictures, articles of vertu, manufactures, all things, are exhibited at the same time. It answers the purpose of filling the town, and those who are especially fond of only these attractions, being on the spot, visit all. At these county meetings machinery plays a great part, and the exhibition is no longer confined to mere ploughs, harrows, scarifiers, winnowing and horse mowing machines, turnip-cutters, and so on; *objets de luxe*, in the way of fireplaces, garden seats, are in great variety, and lately we have seen statuettes, and figures in bronze.

The round at Brighton was happily chosen, and much of the internal arrangement of the Royal Agricultural Society of England was profitably copied.

The old Dorkings were very good, and many of them very heavy, the first-prize birds of Dr. Campbell were highly meritorious, and in marvellous condition, if the time of year be considered. Chickens were also good, but there was in the prize pen an indication of gony feet. As we published the names of the successful last week, we shall only now advert to those birds that demand especial notice. The White Dorkings were all good, but weak in numbers. Game made amends. The Brown Reds were capital, so were several pens of Black Reds. The other class of Game showed a rarity in three pens of Blues. *Spanish* were very good, both in numbers and quality. The hens showed best, as many of the cocks showed with disfigured combs from the last long winter. Adult *Cochins* showed badly; they were outnumbered by the Chicken class, and by the Whites. *Brahma Pootras* were good in every respect, and the competition was close. The birds shown by the Marchioness of Bath were very good. There were excellent *Hamburgs* in all classes, the Pencilled being better than the Spangled. The *Polands* were excellent, and good enough to win against much greater competition. The Game Bantams far outnumbered and outweighed their Sebright brethren. The Duckwings were very good, and there were excellent Piles.

Aylesbury and Rouen Ducks were not numerous. *Geese* were excellent. In the Variety class of Ducks, there were Mascovy, Buenos Ayrenn, Blue, Grey, and Mandarin. The *Turkeys* were perfect, the first-prize in weight, the second in colour. We hardly ever saw birds so beautiful as the Marchioness of Bath's; they were sold immediately.

Pigeons were excellent in most classes. Carriers showed largely. Tumblers were so equal in merit it was difficult to adjudicate. Jacobins, Fantails, Owls, Trumpeters, Barbs, and Archangels all perfect. In the distinct varieties, a most excellent pair of Pigeons called Ice Pigeons were much noticed. We should like to know how they gained the name.

The Judges were H. Loder, Esq., The High Beeches, Crawley; and Mr. Bailly, of Mount Street, London.

TOMTITS' NESTS IN AN INVERTED FLOWER-POT.—It may be worth while letting those among your readers who may be

interested in the habits of birds know the following curious case:—The gardener had left in a newly-sown-out bed a nine-inch pot turned upside down. Lifting it one morning he found 2 inches of moss below it, in which two *tontitis*' nests were embedded—one containing only one egg, the other nine; to which, however, a tenth has since been added. The parent bird has since been sitting on the whole ten eggs. She has an access only through the drainage-hole of the pot, which measures exactly 1 inch in diameter. In at that hole she, or rather they, must have taken all the moss. It will be interesting to find how she will get her young ones out through the hole.—G. S. A., *Ayrshire*.

AN IMPROVED PAYNE'S HIVE.

I was much pleased to see in the *Journal* of May 2nd an article on Ligurians in Ireland, showing that the sharp little foreigners are being domesticated so near home, and also upholding that superiority over their black neighbours, claimed by their first importer into Britain, our master in apiculture, the "DEVONSHIRE BEE-KEEPER," to whom we owe an everlasting debt of gratitude for his valuable contributions to "our *Journal*" on a subject which particularly interests all who keep bees.

I have long been thinking of introducing the Ligurian bee into my apiary, but have been deterred by the reasons mentioned by "Squir." Those objections have, he states, been removed by Mr. Woodbury. I fear that, having what is considered here a large apiary and a populous neighbourhood (in bees), I should find it difficult, if indeed possible, after going to the expense and trouble, to keep the strain pure, as the Ligurians cross so readily. There are, doubtless, many who could, if they would, throw light on the subject, were they to surmount their bashfulness to rush into print, and which deprives us of many valuable hints which might be learned from their failure or success.

When recovering from an illness I attempted hive-making, and finding straw the only material I could manage (though none can compare with the bar-and-frame), I fancied I succeeded in making an improved form of Payne's hive, after this fashion:—The roof is made separate from the body of the hive, and can be raised or fastened down. The lower part, or body of the hive, has a crown-board of pine pressed down, which keeps the straw circular. There are three hoops formed of briars, tied with fine wire at the joinings, on the outside, and one hoop on the lower part inside; these keep the straw in its place and save stitching, which is at best but tedious work. The straw is upright, hard, and firm. The advantages in favour of this plan are easily seen: the straw of the roof being straight down, throws off the wet better than the old plan of an adome roof; the body has the same advantage. The straw being quite unbroken, not being crushed or bent, it must form a far better non-conductor of heat or cold than when the straw is bruised, so the temperature must be more equable and ventilation more perfect. The hive, too, must be much more durable than the old form, as the wet will not lodge about the stitches, where the old hives fail first. The roof is stitched with split briars, and the top bound round with the same; the binding is painted with a mixture of ochre, resin, and oil; also the ends of the straw of the body of the hive, as well as the hoops. The whole looks much neater than the old cottage hive, and needs no cap or handle, the roof being perfectly waterproof.

This is a very backward season. I have no swarms as yet, and there is little prospect of a good honey-harvest. I shall think myself fortunate if I can carry safely through without having to feed up in September next, or forfeit the title of—BEE FRIEND.

THE HONEY HARVEST IN SOMERSETSHIRE.

My apiary is in a very poor way this year, owing to the miserable spring and late summer. I have not had a single swarm or sign of one yet (end of June). I have not seen a drone out, nor a single cell sealed up with honey—in fact, my bees have been and are living from hand to mouth. Two hives

died of starvation in the middle of May, although I was feeding them, and two others almost followed their fate, and are very weakly still. There seems to be no honey even now in the flowers. Altogether, so far, this promises to be the worst bee year in my pretty long experience, not excepting 1861.—B. & W.

LIGURIANS IN JERSEY.

At the recent show of the Jersey Royal Horticultural Society, some Ligurians were exhibited under glass in juxtaposition with the common black bee, and, being the first of this beautiful variety of hive bee which have been seen in this island, they attracted much attention. We extract the following particulars from the printed description which was laid on the table with the bees.

"THE LIGURIAN (*Apis ligustica*), or YELLOW ITALIAN ALP BEE.—This beautiful variety of bee is a native of the Alps. The merit of introducing it to England is due to Mr. Woodbury, the eminent "DEVONSHIRE BEE-KEEPER," who obtained it from Monsieur H. C. Hermann, of Switzerland, on the 19th of July, 1859, since which time it has become known both far and wide.

"Their superiority over the black bee consists in—that they are less sensitive to cold; that their queens are more prolific; they swarm earlier and more frequently; they are abundant honey collectors; and are more courageous and active in self-defence.

"Mr. Tidy, of Manor Cottage, Noirmont, obtained a stock of these bees direct from the apiary of Mr. Woodbury, and they arrived in Jersey on the 20th of June, 1866, in the most perfect order, and headed (Mr. Woodbury assured him), by a perfectly pure and beautiful queen; and her majesty has begun the season by issuing on the 1st of last June with the largest swarm Mr. Tidy has ever witnessed. This was followed on the 9th by a second swarm, to all appearance equally large. These two natural swarms Mr. Tidy has secured in Woodbury bar-frame hives; he therefore trusts they are now safely established in the Island."

QUEEN'S EXCURSIONS.

I NOTICED in one of my hives to-day at 2 p.m. the queen came out, and took a flight for about two minutes, and came back again. The bees that were upon the alighting-board seemed amazed at it, but upon her return were delighted, and followed her in, fanning with delight. What seemed strange to me, it was the queen of a swarm that I hived last Saturday—a first swarm—and they have been working well since they were hived, and commenced carrying pollen the day afterwards. Is the above an uncommon occurrence?

I may also state that the young queen, impregnated by the Ligurian drone last season at the distance of five miles, is doing well, and throwing out good-marked bees.—SOUTH LANCASHIRE BEE-KEEPER.

[We have no doubt that the queen was a young one, and that her flights have been continued. The old queen is sometimes deposed, and the first swarm issues under a young queen. Yours is very probably a case in point.]

ACCLIMATISATION AT THE ANTIPODES.

I AM indebted to Mr. Edward Wilson, the original President of the Acclimatisation Society of Victoria, for a copy of the fifth annual report of the proceeding of this, probably the most prosperous, and certainly the most valuable of all the associations which have been formed for the purpose of acclimatising, in different countries, useful plants and animals not originally indigenous to or which had not been before introduced into the country or colony which is the scene of the Society's labours.

The Report states that the great achievement of the Society during the past year has been the introduction of a flock of ninety-three Angora goats, which there is every prospect of speedily establishing in the country, as, since the arrival of the flock, its increase has been sixty, whilst only two have died. The average weight of the fleece of these goats is about 4 lbs., and as the market price is generally 1s. a-pound higher than good sheep's wool, the value can readily be calculated. The demand for the wool is practically unlimited, so that no fears need be entertained of over-stocking the market. Some wool shorn from the goats, which have been for some years at the Royal Park, was sent to England by the Council, to Messrs.



Titus Salt & Sons. This firm most liberally had it made up into cloth without any charge, and returned it. It has been exhibited in the Intercolonial Exhibition, where it has been universally admired. These animals are, therefore, in a utilitarian point of view most valuable, whilst the beauty of the fleece at the same time renders them most pleasing objects to the eye. That they are hardy is sufficiently proved by the fact, that out of ninety-five shipped in London, ninety-three were landed in Australia after an unusually severe and lengthened voyage of 120 days.

The Council congratulate the subscribers upon the complete success of the salmon experiment. The "Lincolnshire," with a shipment of ova on board, arrived out on the 1st of May, 1864, when a large proportion of the salmon and salmon trout ova was found to be alive. The delicate task of transshipping the ova having been successfully performed under the superintendence of Mr. W. Ramsbottom, who had come over from Hobart Town specially for the purpose, the hatching in Tasmania resulted in 6000 salmon and 1000 salmon trout. The salmon which were hatched two years and a half since have gone down to the sea, and their return was looked for when the report was written. Since that date, however, so many have been seen by various trustworthy witnesses, including Mr. Ramsbottom himself, ascending the river Derwent, in Tasmania, that their complete naturalisation is placed beyond the shadow of a doubt.

The brown trout, also, having now spawned, and fry having been hatched from the ova, their acclimatisation may also be looked upon as having been successfully accomplished.

Two very interesting experiments were made by Mr. Youl at the time he sent out the last shipment of ova. In the ice-bin in which the ova were deposited was placed a box, containing cocoons of the Ailanthus silkworm, and some fruit trees and beather. Upon arrival the cocoons were placed in charge of Professor McCoy, and one of them produced a living moth six months afterwards. The others on being opened were found to have died in France, and never to have assumed the pupa state in the cocoon, so that the voyage had no connection with their death. The trees and beather arrived in as perfect a state as if they had only just been lifted from the nursery. The importance of this experiment can hardly be over-estimated, showing as it does that all the vegetable world of northern Europe is placed at the disposal of Australia.

During the past year twenty-two Axis deer have been sent to Longerenong, on the Wimmera, where they have been liberated in company with thirteen others already in the possession of Mr. Samuel Wilson. The intention in selecting this spot is, that the Grampians may become stocked with this beautiful species of deer.

With respect to the future, the Council announces its intention to pay special attention to the Angora goat, and to the Ostrich, and that since the date of the report four very fine Ostriches have been received.

In conclusion, the Council refers to the more prominent results of the Society's labours during the past five years, and which are thus summed up:—

"The gardens at the Royal Park have been formed entirely by the Society, and this of itself has cost a large proportion both of the Government grant and also of the private subscriptions of the members.

"Deer of the Axis, Hog, Sambur, and Fallow species have been set free in such numbers as to warrant the belief that they are fairly established in a wild state in the country; whilst a few of the Manilla, Formosa, and Barasingha species are being kept at the Royal Park until there are sufficient of them to render it advisable to turn them loose.

"Several English, Cape, and Indian pheasants have been set free on Phillip Island, as well as English and Ceylon partridges; Californian, Chinese, and Tasmanian quail, &c.

"The great success which has attended the introduction of the hare has been previously referred to.

"In a country swarming as this is with insect life, it was one of the early objects of the Society to introduce birds that would enable the gardeners and farmers to cope with this pest. The house and tree sparrow and the chaffinch from England, the sparrow from China, and the mynahs from India, are now completely established, and have been found to be most effective in destroying caterpillars and other insects. The Council has received several letters from farmers and gardeners, giving conclusive proof of the great value of these insectivorous birds. When these birds and their congeners have had time to spread, it may be confidently expected that some of the greatest draw-

backs to successful farming in this country will disappear. The acclimatisation of the English thrush and skylark may also be looked on as accomplished.

"With fish the Society has been very successful. To the salmon, salmon-trout, and brown-trout, it is needless to refer further. The Society has also introduced the Ceylon perch, the English roach and tench, and now, thanks to Mr. Morton Allport, of Hobart Town, a warm friend of acclimatisation, the English perch."

It is pleasing to learn that the great services of Mr. Edward Wilson, the former President of the Society, but who is now resident in England, have been gracefully acknowledged by the Acclimatisation Society of France, which has presented him with its gold medal as having used the greatest efforts in the cause of acclimatisation. His success in transporting the Ligurian bee from my apiary to Australia may probably yet dwell in the recollection of the readers of "our Journal."—A DEVONSHIRE BEE-KEEPER.

IMPORTATION OF EGGS.—The imports of eggs into the United Kingdom appear to be still extending, having amounted in the four months ending April 30th this year to 142,220,760, as compared with 140,188,560 in the corresponding period of 1866, and 107,821,440 in the corresponding period of 1865. In April alone the prodigious number of 58,731,480 eggs was imported. The progress of our egg imports has been extraordinary of late years, the number imported in 1866 having been 438,878,880, as compared with 364,013,280 in 1865; 335,298,240 in 1864; 266,929,680 in 1863; 232,321,200 in 1862; 203,313,360 in 1861; 167,695,400 in 1860; 148,631,000 in 1859; 134,685,000 in 1858; and 126,818,000 in 1857.

OUR LETTER BOX.

PREVENTING HENS SITTING (*R. T. Yaxley*).—If you refer to our Number published on the 13th of June, you will see a suggestion how to induce a hen to abandon her sitting propensity.

DORINGS AT THE BRIGHTON SHOW.—Mr. F. Parlett, Leathercutts Lodge, Great Baddow, near Chelmsford, has written to us that the second prize for old birds was awarded to him, and not to Mr. Cliff.

FOOD FOR YOUNG TURKEYS (*Forest Hill, E. S.*).—After your poulters are hatched keep the hen in confinement. If allowed to be at liberty she will drag her unfortunate offspring through dew and rain till none remains. If she starts with a dozen, she is quite content if she brings home two. Nothing is better to put her under than an empty china crate. It affords room for the poulters to be fed, and protects them from other poultry. Curd, and bread and milk, and boiled eggs chopped fine are excellent things at first. They may be continued as changes afterwards, but the staple food should be oats, peas, and beans ground up together, slaked with milk, and mixed with onion tops chopped very fine.

DUCKS AT BRIGHTON SHOW.—The first prize for Rouen Ducks was taken by "H. Dowsett," not "Densett."

PIGEONS DISEASED (*Carrier*).—We fear your Pigeons are suffering from the disease called "going light." It seems to resemble the atrophy of the human subject. Try pellets of cod-liver oil and flour, completely change their food, and add a little hempseed. Put anything into their loft you can think of which Pigeons like, such as salt, chalk, mortar, growing lettuce and cress, &c. If possible, change their habitation, as a place becomes contagious, or at any rate remove the birds for a few days to some sunny shade while you linewash and cleanse their loft thoroughly.

CAMPION IN WATER FOUNTAIN (*K.*).—The quantity of campion in the fountain for chickens is immaterial. We put a lump about the size of a walnut into a two-quart fountain.

BEEs DESERTING THEIR HIVE (*R. Eilby*).—The death of the queen at a time when they are unable to supply her loss, is the usual cause of bees dwindling away, or deserting their hive. Nearly the same effects may, however, sometimes be produced by foul brood; but in these cases the foul and fetid condition of the combs renders the cause sufficiently apparent.

BREAKING UP A HIVE (*W. H. K., Co. Dublin*).—Twenty-one days after the issue of the first swarm is the best time for driving the bees out of a hive and appropriating its contents, which will then be found to be nearly free from brood. Our correspondent informs us that swarms in Ireland have this season been very late.

PREPAYING J. F. C.—It is quite certain that you have been unfairly treated—as we have not heard the other party use a mild term—but it is also certain that you acted indiscreetly. If the dog had died or been stolen after you paid you would not have been able to have recovered your money. We should proceed against the vendor without delay, and without any forbearance.

POULTRY MARKET.—JULY 3.

Our supply increases. The time is arrived when we may expect an influx of young poultry.

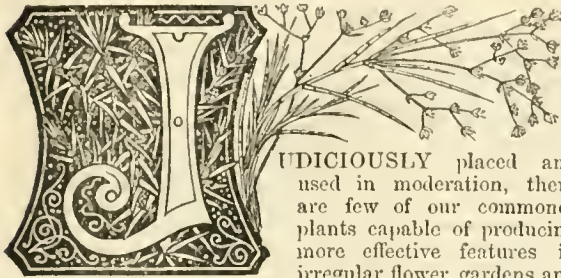
	s. d.	s. d.		s. d.	s. d.
Large Fowls.....	3	0 to 3	6	Pheasants	0 0 to 0 0
Smaller do.....	2	0	2 6	Partridges	0 0
Chickens	1	6	1 9	Grouse	0 0
Goslings.....	1	0	0 0	Guinea Fowls.....	0 0
Ducklings.....	2	0	2 6	Rabbits.....	1 4
Pigeons.....	0	8	0 9	Wild do.....	0 8

WEEKLY CALENDAR.

Day of Month.	Day of Week.	JULY 11—17, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.	Days.	m. a.	
11	TH		74.9	50.5	62.7	10	57 af 8	13 af 8	21 af 8	25 af 0	10	5 8	192
12	F		75.6	50.3	62.9	13	58 3	12 8	21 4	5 1	11	5 16	193
13	S	Royal Horticultural Society, Promenade.	75.8	51.8	63.8	14	59 3	11 8	18 5	39 1	12	5 23	194
14	SUN	4 SUNDAY AFTER TRINITY.	74.0	50.5	62.2	14	0 4	10 8	10 6	17 2	13	5 30	195
15	M		76.5	50.4	63.4	20	2 4	9 8	57 6	1 2	14	5 37	196
16	TU	Royal Horticultural Society's Bury Show	75.9	49.6	62.7	16	8 4	8 8	38 7	51 3	0	5 43	197
17	W	[opens]	76.2	51.3	63.7	15	4 4	7 8	14 8	47 4	16	5 48	198

From observations taken near London during the last forty years, the average day temperature of the week is 75.5°; and its night temperature 50.5°. The greatest heat was 93½°, on the 14th, 1847; and the lowest cold 31°, on the 16th, 1863. The greatest fall of rain was 1.60 inch.

PROPAGATION AND CULTURE OF THE HOLLYHOCK.



INDICIOUSLY placed and used in moderation, there are few of our commoner plants capable of producing more effective features in irregular flower gardens and

ornamental grounds than the Hollyhock, and a few words on its propagation and general management may not be unacceptable, more especially to those of your readers who have not hitherto considered it one of their special favourites.

The modes of propagation resorted to for raising or increasing a stock of plants are various, each with something to recommend it, according to the circumstances under which it is adopted.

SEED.—Sowing ought seldom to be resorted to by growers of small collections, unless with the view of raising improved varieties. As a means of acquiring a stock for decorative purposes it is very precarious, as a great many of the seedlings will in most cases turn out worthless, even though the seed may have been saved from the best of flowers. One way of proceeding is to sow in pans or boxes early in March, placing them in a mild heat of about 60°, and, when the first pair of rough leaves are beginning to develop, remove them into a cold pit or frame, or if these are not available, to some shelf near the glass in the greenhouse or any other cool place. If thickly sown the plants will soon begin to be crowded, when they must be thinned, and pricked-off into other boxes about 3 inches apart. In these they may remain so long as they can without drawing, but if this is likely they must, if the weather and the state of the soil admit, be removed to some snug not over-exposed border in the kitchen garden, previously prepared for them by being deeply dug and well manured with very rotten dung of any sort. Planted in this at 1½ foot apart they will flower before the end of the season, when their merits can be judged of, and those varieties worth keeping should be cut down, and planted immediately in their permanent situations.

Another and much easier method is to sow in the first week of June on any piece of rich ground, and in the end of September to transplant into a two-feet border at the bottom of a south wall, where it is easy to afford them a little protection in hard weather, moving them again in spring to their flowering quarters when they have fairly begun to grow. By this plan, however, a greater danger is incurred of having some prominent position occupied throughout the following autumn by specimens such as delighted our great-grandfathers; for although those who have been in the habit of raising seedlings for a long period can pick out a large proportion of the single ones by the appearance

of the leaf, yet none of them can be depended upon as really good flowers.

By CUTTINGS IN SPRING.—As soon as they can be had, take some of those shoots which are thrown up from old plants at that season, trim off the lowest leaf, leaving the rest intact. Prepare the requisite number of five-inch pots by draining them well in the usual manner, and filling up to within half an inch of the brim with soil composed of equal parts of loam and leaf mould, with a little sand added; then, with a round blunt dibber considerably thicker than the cuttings, punch five or six holes round the sides of the pot; drop a little silver sand into each, and when the cuttings are inserted fill up the remaining interstices also with sand, and press the whole down rather firmly. Place in a mild bottom heat of from 55° to 60°, shading a little in bright weather, to prevent the necessity of watering, which must be done as seldom as possible until the cuttings are fairly struck, which will be in about five weeks. Being very liable to damp off, any steam or stagnant air in the frame must be carefully guarded against.

By EYES.—When side-shoots make their appearance they are generally pinched off, but when eyes for propagation are wanted a few of the earliest should be spared. When these begin to become hard and well ripened, let them be removed, and cut into pieces, each possessing an eye, a healthy leaf, and about 2 inches of the stem. Cut across immediately below the joint as for a cutting, and again about 1½ inch above it; insert in shallow pans, place in a cold frame, and keep rather close. Remove the old leaves as they begin to decay, and in a few weeks two or three young ones will appear, when the plants may be potted off into small pots. Shift again when required, and never on any account allow them to get potbound. At this and any subsequent shift they may be indulged in a rather rich compost, consisting of two parts loam and one part very rotten cowdung, with a few handfuls of bone-meal added, and as much sand as will keep the whole open.

By GRAFTING.—Although not so much practised as any of the preceding, this is at once a sure and expeditious mode of increasing any favourite sort. Old plants that have been wintered in pots supply the best stocks for this purpose. Examine them about the beginning of February, and if the old roots have begun to emit small white rootlets, they are then in a fit state to be operated upon. Remove some of the roots with as many of these fibres attached as possible. Whip-graft in the ordinary way, and when tied rub over with soft clay, and pot into small pots, keeping the graft an inch below the soil, which should be well pressed round the neck of the scion. Place in a gentle heat, shade, and keep close, and in a fortnight most of the grafts will have taken.

By DIVISION.—When done flowering, or when the spikes begin to be unsightly, some of the larger plants may be lifted, and divided into as many parts as there are healthy shoots, securing as many roots to each as possible; plant these divisions in any rather dry sandy soil until the spring, when they will be found very serviceable for planting at the back of herbaceous or mixed shrubby borders.

CULTURE.—When by any of these or other means a stock

has been secured, the next consideration is, how and where to grow them to the best advantage. As to soil, any that can be described by that most un-descriptive of all known words, loam, will grow them to perfection, provided it be deep, well drained, and well manured. If a number of them be intended to be grown together as a collection, the ground should be trenched 2½ feet deep in autumn or early in winter, working in plenty of good cowdung, or if that is not procurable, the oldest Cucum-bed will do instead. In trenching throw it up ridge-and-furrow fashion, so that as much surface as possible may be exposed to the action of frost and air. Pick out no stones that do not actually interfere with the free use of the spade; for there can be no doubt but that many really good gardeners greatly sin against themselves in this small matter when preparing ground for crops of nearly every sort.

In March, if dry, level the ground, and prepare for planting-out by making pits 15 inches deep; the distance between each, as well as between the rows, being regulated by the scarcity or otherwise of ground. Mix up as much leaf mould, rotten dung, and sand as will afford a couple of spadefuls to each pit. The plants if not in pots ought to be lifted with as good balls as possible, and carefully planted, giving, if necessary, one good watering, and then mulching over with dung just rotten enough to keep it from being blown about. In a short time the flower-stems will begin to rise, when the stakes must be placed, and secondary shoots removed as they appear; pinch off likewise all laterals from the flower-stems whenever they show themselves; keep them well tied up, watering copiously when needed, and noble spikes of flower will more than repay all the little care and labour expended upon them.

When their beauty is past, cut them over, and dig or fork-in a little good manure, and in frost mulch over with half-rotten leaves and litter, drawing it well round the neck of each plant; but for small collections it is much better, if accommodation can be had, to lift and pot, or pack in cold frames over winter.

As to the use of Hollyhocks in tastefully-arranged flower gardens one error should be particularly guarded against, and that is, using them to excess. They, as well as any other conspicuous ornaments when oft repeated, lose half their charms, and fail to educe any feelings other than those of monotony and weariness; but when planted in irregular groups, or when, half-hid, they shoot up singly here and there amid dark-leaved shrubs or tall graceful plants, then, although "only Hollyhocks," they have an effect richer and more gorgeous than that produced by many other more expensive plants.—*AYRESHIRE GARDENER.*

CLASSIFICATION OF PELARGONIUMS.

I OBSERVE that at page 441 of the last volume of THE JOURNAL OF HORTICULTURE you divide the group of Zonal or Horseshoe Pelargoniums into four sections or classes. I should also be inclined to divide them into four sections, but I would slightly differ from you in my mode of doing so, and perhaps you will allow me to lay my views upon the subject before your readers. My arrangement would be simply as follows:—Class 1st, Green Zonal Pelargoniums; Class 2nd, Golden Zonal ditto; Class 3rd, Golden Variegated Pelargoniums; Class 4th, Silver Variegated ditto.

Class 1st, Green Zonals, to comprise all the green-leaved horseshoe varieties, and also the few sorts which do not show a distinct zone, such as Tom Thumb, Christine, &c.; but, their number being so small, it would not be desirable to separate them from the more numerous varieties which very properly give their name to the class.

With regard to the Nosegay sorts, if it should be considered desirable to separate them from the green-leaved Zonals, their flowers afford a ready and accurate means of doing so.

Class 2nd, Golden Zonals.—This class embraces all the varieties sometimes called "Bronzes," "Bronze and Gold," "Golden Bicolors," &c., such as Beauty of Oulton, Mrs. Longfield, &c., having a yellow, or, rather, a pale green ground colour and a brown zone. Some writers upon this subject appear inclined to class these varieties as Variegated Pelargoniums, and this is certainly quite a new idea. If it is admitted to be correct, then all varieties of the Green Zonal class which exhibit the horseshoe mark are equally entitled to be considered as such; and if this be conceded, it will certainly upset all the preconceived ideas which most people have formed as to what constitutes a Variegated Pelargonium.

For my own part, I am still inclined to think that a yellow or white margin is indispensable to a variegated leaf, or say, a partial or entire absence of colouring matter from some part of the leaf-surface. The zone of the Pelargonium is not this, but is rather something added to the leaf; whereas variegation is something abstracted or taken away from it. In short, the one is coloration and the other is variegation, essentially and entirely distinct from each other.

Class 3rd would, of course, include all the golden or yellow-margined varieties irrespective of zones, from Golden Chain to Lady Cullum, &c.

Class 4th would also include all the silver-margined or silver-variegated sorts, such as Flower of the Day, Bijou, Italia Unita, &c.; and I would at once discard all such terms as Bicolor, Tricolor, Versicolor, &c., as only tending to lead to complication and confusion.—*P. GRIEVE.*

VARIEGATED PELARGONIUMS AT THE BURY ST. EDMUNDS SHOW.

I AM unable to enter into this question so thoroughly as I could wish at present, and can add but little to what I have already advanced in a contemporary, where I had already done all that Mr. Wills suggests at page 441.

In the main I agree with him as to the meaning that should be attached to the word "variegated." It is no new rendering by me, as my friends know that I have always contended for the comprehensive acceptance of the word. I am not yet convinced that there is any physiological or botanical reason for limiting the term to yellow and white; and even if there were, such facts hardly touch the question. The prize was not offered from a botanical but a popular point of view. The subscribers to the County cup left the matter of the prizes in my hands. My object in suggesting this prize was to bring all the variegated Pelargoniums that were worth seeing to Bury, so that local and distant competitors might honourably contend for the mastery. I had no idea that any attempt would be made to limit the competition on botanical or any other technical grounds. Had any hint of this been given, I would at once have protested against it, and thrown the prize open for every "painted leaf of whatever colour."

I am glad that you agree with me that the word as it stands in the prize schedule is comprehensive enough to include all. That is the solid ground I take. It was designed to be so. Had even the word "zonal" been used it would have excluded many that ought to be included.

I cannot enter into the merits of your proposed classification. It may be as correct and convenient, or more so, than others; and for trade and bedding-out or scientific purposes, such classifications may be desirable and necessary, but for competitive objects most classifications would be worse than useless. What practical gardeners want, and the great public outside of us care to know, is not the best in any one class, but the best of all for decorative purposes. If these or any other sharply defined lines are laid down, Jurors would expend their skill in wrangling over disputed points of classification rather than in the concentration of their whole strength in truly assessing comparative merit. Hence, while it may be desirable at times to determine the best in any distinct class, at a great show like that of the Royal Horticultural Society at Bury it is infinitely more important to let all classes contend with each other on equal terms, and to see that the best wins. For this object we must have a general term for the entire class. We find such a term in the plain, common sense, grammatical meaning of the word "variegated;" and it is those who wish to limit its application who are advocating the change, and not we who find it exactly expresses our meaning.

Neither do the objections to comprehension amount to much. It seems that some exhibitors have accepted the word in its limited sense, and have prepared their plants accordingly. Well, then, this objection is balanced thus, that other exhibitors have understood the word comprehensively, and have prepared their plants accordingly. Each exhibitor has done his best to enrich the Bury Show, and the question that now presses urgently for solution is, Shall all or only a portion of those exhibitors be permitted to show?

While promising to bow to the decision of the Council of the Royal Horticultural Society, I yet desire to state most emphatically that I am strongly in favour of throwing the prizes in the whole of these classes open to all comers. Thus only can the victors obtain their full reward, or the vanquished own

themselves honourably beaten. the Show be enriched as anticipated, or the public be perfectly satisfied.—D. T. Fish, *Hardwicke, Bury St. Edmunds.*

MERITS OF THE SPIRÆAS.

THERE is now and then something said in "our Journal" about border flowers, and I think something more might be said about some or all of them. At all events I will venture to call attention to one genus of them, seeing that they do not occupy the position I could wish in the shrubbery and herbaceous borders—I mean the Spiræas.

First take one of the shrubby species for an example—*Spiræa arifolia*. As a single specimen well grown in the shrubbery or any open space, with its light and graceful plumes, when in bloom I know of no plant more beautiful. It is worth any amount of care, and deserves a place in all shrubberies. Then there are *Spiræa bella*, *S. Douglasii*, *S. salicifolia*, *S. grandiflora*, *S. lanceolata*, and others—all deserving of more extensive cultivation.

Of the herbaceous species, *Spiræa aruncus*, with its beautiful creamy white, feather-like plumes, is a meet companion indeed for *S. arifolia*. In my opinion *Spiræa aruncus* is one of the most graceful border plants that I have seen. Besides, there are *venusta*, *lobata*, *ulmaria*, and others that might be named.

Last—not the least favoured—is *Spiræa filipendula*, a British plant though it be, for it is worthy of a place in the herbaceous border, along with its compeer, *S. filipendula flore-pleno*.

Prior wrote of this family, and so would I—

"Peaceful and lowly in their native soil,
They neither know to spin, nor care to toil;
Yet with confess'd magnificence deride
The vile attire and impotence of pride."

—M. H., *Acklam Hall, Middlesborough-on-Tees.*

FRUIT-THINNING.

"It is always a troubled anxious period, that of fruit-thinning—a time to be lived through as one best can, but not enjoyed," said Mrs. Stephen Taylor, of Rose Hurst; but, then, Mrs. Taylor has little interest in the growth of fruit under glass, and always regards her husband's suggestions or explanations to his gardener or bits of gossiping to herself as complaints, and is very thankful that "the season can come but once in the year." She does not understand "why there should be so much talk and such a fuss about fruit thinning inside; the Gooseberries, Currants, and Apples are left to thin themselves or go undone, and they are much more useful, as well as wholesome, to say nothing about the cost."

Of course, Mr. Stephen retaliates, and will have it "that the little blackcaps thin the bushes sometimes too much for us; and that there is sure to be a north-east wind come in with a vengeance when the Apples are about the size of nuts, and shake them down, so that Nature does her thinning in a wholesale manner; but, then, we cannot allow blackcaps or north-east winds in our orchard-houses or vineries."

Poor Mrs. Stephen had the misfortune to marry into a large family, all proud of their fruit-growing, and what makes matters worse, they live near, and are always visiting each other, and comparing notes; and their conversation, pleasant enough to themselves, sounds to the lady like the words of an unknown language. Brother Matthew says, "If she would cut an eye from a cane, and grow it, and fruit it, the dead words would come to have life; and she might do so easily enough, seeing she has no babies to nurse." But Mrs. Stephen thinks she has plenty of the trouble without entering the lists. Why, only last Easter Monday, when they went to brother Jeremiah's to dine, he carved so slowly, that the lamb became cold and stiff, telling about the number of his Peach blooms, "as if it mattered." And even when they were all ready for the return home, they would have a light, and go in and see if the bloom was really setting on the Peach trees, and if the Vines had started in good order; and brother Jeremiah carried the lamp all on the slope, as men usually do, until the oil, not very fragrant, dropped about. Nor was that all, for Mrs. Stephen said she bore away among her skirts more species of living insects than she knew to have existed.

And then it is very tiresome going over to brother Matthew's farm, for he is always talking about "my Vines and my Grapes;" "such promising bloom, such compact, properly thinned-out bunches." He makes long speeches, and declares "that any man

who can save a couple of hundred pounds may sit under his own Vine, and eat the fruit thereof, and is quite sure it would pay good interest; his does at least, better than his railway stock at present." And he is sure to say all this when brother Watson is there, and his vinery cost more than £200, and pays no interest any way, though it has been up more than four years. He might have had a few bunches of Black Hamburgs the year before if he had not followed brother Stephen's advice, and cut away his fruit until what was left on the canes looked like Beans strung on slender threads, and hung down in a weary drooping manner until the weak threads broke or dried up, and the berries fell away. Mrs. Stephen is "quite sure that all her husband understands about the matter is to eat the fruit and pay his bills."

Yet, by theory, Mr. Stephen is a great thinner—never says to his gardener, "There, you have done enough." Mr. Matthew says "that his brother Stephen's bunches are always thin, and loose, and lanky, falling about on the dish when gathered as if they possessed some watery element, and were seeking their level." He prides himself upon his own bunches keeping their proper shape, sitting upon a plate or dish in a correct manner, not ashamed of their appearance." Mr. Matthew is a great worker; but, then, he is large of limb, and strong of muscle, and he puts his heart as well as his hands into his work; his house is well built and well ventilated, and stands on a warm soil in an open airy situation. Mr. Watson says that that is more than half the battle, for his house is on low land, near to a river, and close upon a neighbour's plantation; so close, indeed, that the trees not only shelter but shade, the heavy branches of a *Sycamore* sweeping right over his little lean-to vinery, and every gust of wind shaking about the myriads of green flies that crowd the under sides of the leaves. Then, too, the leaves choke up his back ventilators, keeping out the fresh air, and making perpetual lines and shadows, such wavings to and fro in his vinery that it is unpleasant to be there. Nor is that all, they keep out the sunshine, so that the walls and floor grow damp and green, and when he complains, his obliging neighbour says, "Cut them. Cut them by all means if they trespass on your property; they have no business, only let my side of the fence alone." So Mr. Watson cuts away in a half-do fashion; for, afraid of taking too much, he takes too little, and ends with doing no good to himself, and no harm to his neighbour's trees.

"There is one comfort, at any rate, Watson," says brother Matthew, "you will not have much superfluous fruit to cut away; your thinning-time will be short. I hope you will not have to do like Jeremiah, buy tobacco-rag instead of tobacco. I cannot imagine however Jeremiah has patience to grow Cherries and Plums in pots. Why, the heaviest crop I ever saw on one tree would just do for our Sunday dessert;" but, then, Mr. Matthew had seven olive branches and a wife, and his brother lived alone. Then, too, tastes differ, for Mr. Jeremiah would rather have a good ripe Peach than anything in the world; and Mr. Matthew, even at the risk of offending his brother, often declares "Peaches are no better than a mealy Potato or a good Swede Turnip."

When the long days of May and June come then the thinning fever reaches its height, and Mrs. Stephen Taylor says it is dreadful living at Rose Hurst, for each brother wants to have all the Vines done after the manner of his own, and is quite sure they will be ruined if they are not. Though the ruin never comes, yet she fancies it lessens the necessary confidence every Vine grower should have in the plan he has adopted. Then the brothers at their frequent meetings at Rose Hurst, which is a half-way house, argue and dispute over their wine. Mr. Stephen puffs away at his pipe, Mr. Matthew makes long speeches—so long that he is constantly having to relight his cigar, Mr. Watson sits and listens, as befits a younger brother, and Mr. Jeremiah thinks "it does not matter much what way Vines are grown, for it appears to him as if the Vine very much resembles corn, in that it will grow in various ways under very different circumstances. It is like the church on the hill, many paths lead up to it, it is not necessary all should journey by one; some chose the fields, others the back-lanes, and some the dusty highway; and it is all one if they are there before the bells cease to ring."

After this there is silence for a long time. Mr. Matthew gets his cigar on the full go, and Mr. Stephen takes the opportunity to refill his pipe, thrusting it down his throat, pushing the decanter close to his brother, says, "There, Jeremiah, after that you will do with another glass."

But Mr. Jeremiah's eloquent speeches did not put an end to the disputation. It was carried on even more warmly than before; if it was given up for a time, it was only to be taken up again with renewed vigour; and then Mrs. Stephen said her brother Matthew would sit for hours under their Vines, and beg Mr. Stephen not to have his bunches so much spoiled as in the year before; and then the gardener would laugh and say, "Lor bless you, sir, I shall take out pecks yet; I am not like Mr. Meredith, of Garston ("I should think not," said Mr. Matthew in an under tone), I do not care for big, heavy bunches; a pound is enough for any one bunch to weigh, unless you wish to show, and so sacrifice a Vine to the doubtful honour. When I lived at the Priory we used to cut out bushels." "More's the shame, wasting good fruit," replied Mr. Matthew, "let me have a bunch round and firm as a boulder, and weighing as much as I can get it, rather than soft, and loose, and long, like yours, Stephen. You thin the best away." "It is bad for the Vine," replies Mr. Stephen. "That is all nonsense, just an old theory. Gardeners are like sheep, fond of going one way; then it is easier to work in an old groove than to carve out a new one; and you do not suppose, Stephen, that all is found out that might be even about fruit-thinning."

Then Mr. Matthew would go home to his Rose Villa and thin his bunches a little more than he had intended, and Mr. Stephen would say, "There, Andrew, I would leave them a little firmer than last year, I think we did too much at them;" and Mr. Jeremiah would smile and say, "his Plums and Peaches gave him very little trouble;" and Mr. Watson would sigh and say "his Vines gave him less, for he had no fruit to thin."

And so after the storm there came peace, at least for a time.—MAUD.

ROYAL HORTICULTURAL SOCIETY.

[The following report, which did not arrive in time for publication last week, supplies fuller details respecting the subjects exhibited than that which appeared last week.]

FLORAL COMMITTEE, July 2nd.—This Meeting, held on the day of the National Rose Show, was well supplied with novelties, many of them of first-rate merit. Mr. Hodges, gardener to E. Wright, Esq., received a special certificate for a small collection of superb cut Orchids. The spikes of *Phalenopsis* and *Aërides* were most exquisite. Mr. Fraser, Lea Bridge Road, exhibited one of the best *Gloxinias* yet seen; it was called *Rose d'Amour*, and had a white ground with bright rosy earmine shading. A first-class certificate was awarded it. Mr. J. Mundell, gardener to J. C. Cunliffe, Esq., Croydon, was awarded a special certificate for a well-grown specimen of *Lilium anatum*, with a dozen flowers, but sadly disfigured by travelling. Messrs. Lee, Hammersmith, sent a large-leaved plant of upright growth, under the name of *Hedera cantalupfolia*, but which is said not to be hardy.

Messrs. E. G. Henderson were awarded a special certificate for a group of new plants, which were tastefully arranged on the grass near the conservatory. Among them there was a dwarf *Lobelia*, called *pumila elegans*, which, from its compact habit and free flowering, received a first-class certificate. Messrs. Henderson also sent a pretty group of *Tricolored Zonal Pelargoniums*. Lady Sheffield was selected on account of its neat foliage and colouring for a first-class certificate. A special certificate was voted for the whole beautiful group, in which were Mrs. Preston, Model Outline, Mrs. A. Henderson, and *Reticulatum pulchellum*, of which the leaves have a green ground spotted all over with yellow.

Messrs. Veitch sent a most beautiful collection of new and rare plants. Among them were the following:—*Phajus* species, which received a first-class certificate; *Begonia Veitchii*, a most exquisite crimson flower, decidedly the flower of the Exhibition—first-class certificate; *Gloxinia Madame de Smet*, first-class certificate; *Gloxinia Vlaanderen*, first-class certificate; *Gloxinia Topaz*; *Gloxinia Rose et Cochinnelle*; *Croton maximum*, with fine broad conspicuously variegated foliage—first-class certificate; *Croton interruptum*, first-class certificate; and *Croton irregularis*, first-class certificate. These plants were truly beautiful. *Abutilon Thompsonii*, with variegated marbled foliage, also shown by Messrs. Veitch, received a second-class certificate, and *Dracena Moorei* one of the first-class. Other plants from the same firm were *Adiantum concinnatum latum*, *Aralia organa*, *Taxus fastigiata aureo-variegata*, which had been exhibited often before, and *Selaginella Poulteri*, a seedling, with very fine wiry foliage, and quite distinct. It was awarded a first-class certificate. Mr. Anderson, Meadow Bank, near Glasgow, sent a collection of cut Orchids, to which a special certificate was awarded, and Mr. J. Mann, nurserymen, Brentwood, had a like award for an interesting collection of seedling *Zonal Pelargoniums*, many of them yearlings of some promise. Among them were *Tricolor Standard Bearer*, *Tricolor Mrs. Kingscote*, *Tricolor Lady Stanley*, *Starlight*, *The Bride*, *Prince of Wales*, very good; *Lizzie*, *Beauty*, *Sulphurea elegans*, very distinct and promising; and *Startler*, a very good scarlet flower, but not equal to Lord Derby, nor better than *Clipper*, *Dr. Lindley*, and others.

G. F. Wilson, Esq., received a first-class certificate for a magnificent

specimen of *Lilium longiflorum*, grown in a large box; the flowers were unusually fine. Mr. William Paul, Waltham Cross, sent spikes of two very good seedling *Phloxes*, quite distinct in the centre marking. Their names were *Beautiful*, with a purple centre, and *Conqueror*, pale crimson; both received first-class certificates. Mr. Walker, Enfield, sent a seedling British Fern. From Mr. C. Turner came a basket of the new seedling Rose, Miss Ingram, of a pale silvery pink tinge, fine form and substance, a decidedly good and useful Rose. A first-class certificate was awarded it. Mr. Richards, gardener to Lord Londesborough, exhibited a very fine specimen of *Vanda teres*, which deservedly received a special certificate. From Mr. Keeler, gardener to B. Hartley, Esq., Blackheath, came seedling *Lobelia White Perfection*. Mr. R. Edwards & Son, Nottingham, sent a collection of new forms of British Ferns, some of them very distinct and good, and which consisted of *Scelopendrium vulgare Edwardsii*—first-class certificate; *Scelopendrium depauperatum*; *Athyrium Filix-femina Footii*—first-class certificate; *Athyrium Filix-femina tassellatum*, *Polystichum angulare grandidens Padleyi*, *Polystichum diversilobum Padleyi*—first-class certificate; *Lastrea Filix-mas Moorei*; *Athyrium Filix-femina Edwardsii*—first-class certificate. The last had very neat and pretty fronds much crumpled, something like those of the *Parsley Fern*. Mr. G. Macintosh, Hammersmith, exhibited seedling *Nosegay Pelargonium Crimson King* and *Nosegay Princess Mary*; Mr. W. Sims, gardener to E. Dawson, Esq., seedling *Zonal Pelargonium Salmon King*; Messrs. Ivery, Dorking, a collection of cut spikes of very handsomely spotted *Digitalis* in various shades of colour; and Mr. T. Laxton, Stamford, three seedling *Roses*: *Beauty of Stamford*, of a bright rose colour; *Annie Laxton*, very similar to the former; and *Empress of India*, a dark maroon. These seedlings required both form and substance.

From Mr. G. Smith, Hornsey Road, came seedling *Nosegay Pelargonium Grand Duke*, with a very large truss of bright crimson scarlet flowers. This was considered a very promising variety, but was not exhibited in good condition; it certainly surpasses *Le Grande*, a seedling by the same grower. Mr. Wills, Hantroyde Park, sent a collection of that peculiar section, the *Bronze* or *Yellow-leaved Zonal Pelargoniums*, containing some good plants, but they were not entered to come before the Committee. A special certificate was awarded them. Mr. Bull exhibited a collection of *Lilium anatum* in flower, from small bulbs, for which a special certificate was awarded. Mr. Jabez Chater, Gonville Nursery, Cambridge, exhibited some very curious *Zonal Pelargoniums*, and among them an Ivy-leaved yellow *Tricolor*; also *Diamond*, a *Versicolor*; *Goldfinch*, *Shakespeare*, *In Memoriam*, with a peculiarly dark-zoned leaf having a deep green ground colour; *Ignis fatuus*, a *Tricolor*; *Silver Versicolor* Mr. J. J. Chater, *Golden Bicolor pallida*, very distinct and promising; and *Nil Desperandum*, with a well-defined zone, extremely narrow, and nearly on the edge of the leaf. The plants appeared to be nearly all yearlings of some promise. Mr. Chater also sent seedling *Dianthus hybridus*, Chater's New White, very pretty, but not differing from *Marie Paré*; also *Gaillardia aristata splendens*.

ROYAL BOTANIC SOCIETY'S SHOW.—JULY 3RD.

ALTHOUGH last week a brief notice was given of some of the subjects exhibited, this Show was much too important to be dismissed without some remarks in continuation.

Among collections of Stove and Greenhouse plants in flower, the most remarkable was one from Messrs. Cole, Withington, Manchester, in which were fine examples of *Ixora coccinea*, *Dracophyllum gracile*, *Allamandas*, and *Kalosanthes*, together with *Dipladenia amabilis*, covered with large bright rosy-crimson flowers. Collections likewise came from Messrs. Lee, Rhodes, Williams, and Baxendale; also, from Mr. Peed, gardener to Mrs. Tredwell; Mr. Kemp, gardener to Earl Percy; Mr. Donald, gardener to J. G. Barclay, Esq.; Mr. J. Wheeler, gardener to J. Philpott, Esq.; Mr. Wilkie; Mr. Wheeler, gardener to Sir F. Goldsmid, Bart.; and Mr. Ward, gardener to F. Wilkins, Esq.

Plants with ornamental foliage were numerous shown, and among them were fine specimens of *Alocasia Lowii*, the *Croton angustifolium* noticed last week, *Anthurium acule*, *Palms*, *Yuccas*, and *Cordylines*. They were contributed by Messrs. Williams, Lee, Burley, and Glendinning among nurserymen; and among amateurs by Mr. Fairbairn, Syon; Mr. Taylor, gardener to J. Yates, Esq., Highgate; Mr. Peed; Mr. Young, gardener to W. Stone, Esq., M.P.

Of Ferns, fine collections of exotic kinds were contributed by Mr. Hill, gardener to R. Hanbury, Esq.; Mr. Taylor; Mr. Carr, gardener to P. L. Hinds, Esq.; Mr. Young; and Mr. Williams. British sorts came from Messrs. Ivery, of Dorking; Messrs. Edwards, Nuthall; and Mr. Carr. A first-class certificate was awarded to Messrs. Edwards for *Polystichum angulare divisilobum Padleyi*; and second-class certificates for *Scelopendrium vulgare cristatum nanum*, and *S. vulgare maritimum tenue*. Mr. Williams had first-class certificates for four varieties of *Athyrium Filix-femina* *Friszella*, called respectively *cristatum*, *ramosum*, *glomeratum*, and *glomeratum ramosum*. Messrs. Ivery received a first-class certificate for *Lastrea Filix-mas cristata Iveryana*; and one of the second class for *Asplenium germanicum anomalum*.

Heaths were shown in fine bloom by Messrs. Rhodes, Peed, and Ward. Messrs. Cole, Lee, Williams, Wheeler, and Kemp also furnished good groups.

Of *Pelargoniums*, Mr. Fraser, Mr. Nye, Mr. Ward, and Mr. Wiggins

contributed fine groups, and Fancy kinds came from Messrs. Fraser, Donald, and Tedman. Among Scarlet Zonal Pelargoniums, Mr. Ward exhibited a beautiful group in which, besides the splendid specimen of *Rose Rendatler*, noticed last week, were fine examples of *The Clipper*, scarlet; *M. Rendatler*, salmon; *Lenis Roessler*, orange scarlet; *Sobieski*, scarlet; and *Madame Bouchardet*, salmon, shading off to white. Other groups, beautifully flowered, were contributed by Mr. Catlin, gardener to Mrs. Lemmitte, Finchley; Mr. Windsor, Walthamstow; Mr. Winter; and Mr. Weston.

Of Orchids, admirable specimens were furnished by Mr. Brockhurst, gardener to A. Turner, Esq., Leicester, who took the first prize for fifteen plants; and Mr. Penny, gardener to H. H. Gibbs, Esq., Regent's Park, who was second. Mr. Wilson, gardener to W. Marshall, Esq., was third. Smaller groups were exhibited by Mr. Wiggins, Isleworth; Mr. Hill, gardener to R. Hanbury, Esq.; Mr. Page, Mr. Young, Mr. Williams, and Messrs. Lee.

Among other subjects, *Fuchsias* in beautiful bloom came from Mr. Brockwell, gardener to Mrs. Henry, Edmonton; *Lilium auratum* from Mr. Turner and Mr. Bull; and *Amaryllids* and *Sarracenias* from Mr. Williams. Fine boxfuls of cut *Roses* were shown by Mr. Mitchell, of Pildown Nurseries; likewise by Mr. Fraser. Mr. Turner also reproduced the charming new variety called *Miss Ingram*.

Of new plants Messrs. Veitch had a pretty collection, tastefully arranged, and received first-class certificates for the following, nearly all of which have lately been noticed:—*Acrides affine superbum*, *Phajus* species; *Begonia Veitchii*; *Gloxinia Prince Teck*; *Gloxinia Vlaanderen*; *Croton maximum*, interrupted, and irregular; *Alocasia* species, *Adiantum concinnum latum*; *Taxus fastigiata aureo-variegata*, *Nierembergia rivularis*; *Cattleya Downiana*; *Selaginella Poulteri*, and *Caladium Chelsoni*; also a second-class certificate for *Abutilon Thompsoni*. Mr. Bull received first-class certificates for *Leopoldina phlorea* and *Aucuba japonica flavescent*, with young leaves of a golden hue; and Mr. Williams two of the second-class for a *Masdevallia* and *Oncidium*. Of seedling florists' flowers Mr. Turner exhibited Mr. Fleming's beautiful *Nosegay Pelargoniums* *Lady Constance Grosvenor*, and *Duchess of Sutherland*. Mrs. Laing, another *Nosegay* variety of good habit, and with crimson scarlet flowers, exhibited by Messrs. Downie, Laird, & Laing, had a similar award; as also *Titania*, a beautiful *Tricolor Variegated Zonal*, shown by Messrs. Carter, and *Snowdrop*, with green leaves broadly edged with white. The same firm was also awarded a first-class certificate for *Tropeolum Crystal Palace Perfection*, a dwarf bedding variety. Mr. Willis, gardener to Capt. Le Gendre P. Starkie, Huntroyde Park, had a first-class certificate for his fine, bold-looking bronze and gold Zonal Pelargonium *Beauty of Calderdale*, and Mr. Hally, Blackheath, a like award for *Nimrod*, a variety with double rosy crimson flowers. First-class certificates were likewise awarded to Mr. W. Paul for *Phlox Beautiful*; to Mr. Smith, Hornsey Road, for *Faehsia White Unique*, with large flowers, having a pure white corolla and pale rose-coloured sepals; and to Mr. C. J. Perry, Castle Bromwich, for *Verbenas Miss Turner*, rosy blue on a white ground; *Splendid*, violet rose, lemon centre; Mrs. Mele, deep lilac; and J. Birbeck, *cerise scarlet*, with a lemon eye.

The best collection of fruit was that shown by Mr. Miller, gardener to the Earl of Craven, Combe Abbey, and which included *Black Hamburgh Grapes*, three bunches of which could not weigh less than between 14 lbs. and 15 lbs.; *Golden Hamburgh* unusually good; excellent *Peaches* and *Nectarines*, *May Duke Cherries*, *British Queen Strawberries*, two *Nile Melons*, and two *Queen Pine Apples*, not very large, but beautifully ripened. Mr. Rawbone, gardener to C. M. Campbell, Esq., was second with three beautifully ripened bunches of *Black Hamburgh Grapes*, weighing together 10½ lbs.; *Buckland Sweetwater Grapes*, fine *Violette Hative Peaches*, *Melons*, and *Strawberries*. Mr. Johnson, gardener to the Marquis of Ailesbury, was third.

Of *Pine Apples*, the best *Queen* was a beautifully ripened fruit weighing 6 lbs. 3 ozs., from Mr. Ward, gardener to F. Miller, Esq., and good examples of the same variety were contributed by Mr. Smee, gardener to W. H. Stone, Esq., Dulwich; Mr. Wallis, gardener to J. Dixon, Esq.; and Mr. Bailey, *Shardeoles*. Messrs. Penfold, Gadd, and Hanuan had the best fruits of *Providence*.

Grapes were plentiful, and the *Black* sorts good; but the *White* varieties were generally unripe. Mr. Sage, gardener to Earl Howe, Gosnell, was first for three dishes, the varieties being *Black Hamburgh*, *Barbarossa*, and *Buckland Sweetwater*. Messrs. Bannerman, Kittlewell, Tansley, Wallis, and Lane, also showed excellent fruit in this class. The best single dishes of *Black Hamburgh* came from Mr. Sage, gardener to Earl Brownlow, Ashridge, and Mr. Rawbone; fine fruit of the same variety was, however, contributed by Mr. Lane, gardener to J. Miles, Esq.; Mr. Popple, Mr. M. Henderson, Mr. Ross, and Mr. Turner. Mr. Miller had large heavy bunches of *Black Hamburgh*, but they were rather deficient in colour. The best basket of 12 lbs. was contributed by Mr. Hill, gardener to R. Sneyd, Esq. Of other varieties, the best bunches of *Black Prince* were exhibited by Mr. Pottle, gardener to B. D. Colvin, Esq.; Mr. Allport had beautiful bunches of *West's St. Peter's*; and Mr. Standish a basketful of the *Royal Ascot*, together with branches bearing fruit in different stages to show the free-bearing properties of this variety, of which some account will be found at page 164 of the last volume. *Muscats* were not perfectly ripe; the best came from Messrs. Bailey, Johnson, Sage, Tansley, and Osborn. Fine-looking bunches of different kinds of *Frontignans* were shown by Mr. Whiting, The Deepdene, near

Dorking. Some well-fruited *Vines* in pots were exhibited by Mr. Guyett, Herne Hill.

Peaches consisted for the most part of *Grosse Mignonne*, *Barrington*, and *Royal George*, and *Nectarines* of *Elruge*, of *Violette Hative*, and *Hunt's Tawny*.

Plums were confined to a very fine dish of *Orleans* from Messrs. Lane, of Great Berkhamstead; some fine *Brown Turkey Figs* were shown by Mr. Osman, gardener to R. Holland, Esq., and Mr. Sage, gardener to Earl Brownlow; and of *Cherries* there were good dishes of *Black Tartarian* and *Elton*. Mr. Turner exhibited a branch of *Frogmore Early Bigarreau*, loaded with fruit. Of this excellent variety, which is ripe three weeks before the *Bigarreau*, a figure and description will be found in our ninth volume.

Strawberries were not remarkable for their perfection. The best came from Messrs. Widdowson, Record, and Hale. Dr. Hogg, a fine new variety, was shown by Mr. Turner.

Finely ripened pods of *Vanilla* were exhibited by Mr. Bennett, gardener to G. S. Foljambe, Esq., Osberton, and Mr. Fraser had a collection of fruit trees in pots in fine bearing.

BIRMINGHAM ROSE SHOW.

THE sixth annual Rose Show, held in the noble Town Hall on the 4th and 5th inst., was a very satisfactory Exhibition—indeed, far better than could have been expected, even in London, in so unfavourable a season as this has been. Although as a whole it did not prove so effective as the Rose Shows at Kensington and the Crystal Palace, this result was mainly attributable to the place of exhibition, from its squareness, admitting of no long lines of tabling, and the stands had therefore to be distributed, not on one or two long rows of tabling, but along several in the body of the Hall and in the galleries. The consequence was that the general effect—at least when the public were admitted—was not so good as at the Shows just named. For the display had to be viewed, not *en masse*, but in detail. The hot sun and then the heavy rains immediately preceding the opening day, also seriously impaired the freshness of the blooms—so important a feature in the Rose. Notwithstanding all drawbacks, however, the Show was good—very good, and most creditable, not only to the nurserymen exhibitors from a distance, but to the local growers, who, notwithstanding the smoky atmosphere of Birmingham, had many blooms fully equal to any staged at the Metropolitan Shows.

In the Nurserymen's class Mr. Cranston, of King's Acre, Hereford, was first for single trusses of 72 varieties, among which the following were fine: *Senateur Vaisse*, *Madame C. Crapet*, *Prince Camille de Rohan*, *Mrs. Rivers*, *Maréchal Niel*, *Charles Lefebvre*, *François Lacharme*, *John Hopper*, but not so fresh as desirable; *King's Acre*, *Laurent Descont*, *Souvenir d'un Ami*, *Jules Margottin*, *Duchesse de Caylus*, *Solfaterre*, *L'Esmeralda*, *Devoniensis*, *Madame Hector Jacquin*, *Maréchal Suchet* (Guillot fils), *Duc de Rohan*, *Niphotos*, *Victor Verrier*, *Queen Victoria*, *Madame Victor Verrier*, *Maurence Bernardin* very fine, *Madame Videt*, and *Olivier Delhomme*, besides others, which, though a little touched by the sun, were also good. Mr. Keynes, who was second, had excellent examples of *Victor Verrier*, *Mdlle. Anclie Halphen*, *Xavier Olibo*, *Prince de Porcia*, very fine in colour; *Charles Lawson*, *Pierre Notting*, *Souvenir de la Malmaison*, *Marguerite de St. Amand*, *Maurence Bernardin*, *Abel Grand*, *Comtesse Palikao*, and *Madame Fartado*. Messrs. Paul & Son were third, and had very good trusses of *Madame Victor Verrier*, *Comtesse de Chabillant*, *Mrs. C. Wood*, *Alfred Colomb*, *Joseph Fiala*, *Princess Mary of Cambridge*, *Prince Camille de Rohan*, *Fisher Holmes*, very fine; *Duke of Edinburgh*, *Maurence Bernardin*, *Mdlle. Emain*, *Niphotos*, &c. Mr. Cant, who was fourth, had also good flowers.

The stands of 48 varieties, three trusses of each, were very effective. Mr. Keynes was first with *Comtesse Palikao*, *Beauty of Waltham*, *Victor Verrier*, *Mdlle. Bonnaire*, *Princess Mary of Cambridge*, *Maurence Bernardin*, *Souvenir de la Malmaison*, *Pierre Notting*, *Jules Margottin*, *Alba Mutabilis*, *Abel Grand*, *Madame Videt*, *Madame Charles Wood*, *Marguerite de St. Amand*, and good examples of some others. Messrs. Paul & Son, who were second, had *Beauty of Waltham*, very fine; *Mdlle. Bonnaire*, likewise very beautiful; *Alfred Colomb*, *Charles Lefebvre*, *Pierre Notting*, *Josephine Beauharnais*, beautiful, delicate rose colour; *Duchesse de Caylus*, *Olivier Delhomme*, *Exposition de Brie*, *Gloire de Dijon*, *François Louvat*, and *Lord Herbert*, fine, but rather past its best.

For three trusses of 24 varieties, Mr. Cranston was first with *America*, large and very fine; *L'Esmeralda*, bright in colour; *Mrs. Rivers*, *Senateur Vaisse*, *Prince Camille de Rohan*, *Gloire de Dijon*, magnificent; *Vainqueur de Goliath*, splendid in colour; *Beauty of Waltham*, *John Hopper*, *V. Verrier*, and *Baron Adolphe de Rothschild*. Mr. Cant came second with fine examples of *Marie Baumann*, *Le Rhone*, *Pierre Notting*, *Prince Camille de Rohan*, very fine; *Jules Margottin*, *Comtesse de Chabillant*, *John Hopper*, *Rubens*, *Madame Charles Wood*, *Victor Verrier*, *Maurence Bernardin*, *Exposition de Brie*, *Alfred Colomb*, and *Marguerite de St. Amand*. Mr. Keynes was third, had *Madame C. Wood*, very fine; *Prince Henri des Pays Bas*, *Joseph Fiala*, and excellent examples of several other varieties already named.

For single trusses of 24 varieties, the competition was open only to Nurserymen in the counties of Warwick, Worcester, and Stafford.

Messrs. Perkins, of Coventry, were first; Mr. Jackson, Kidderminster, second; Mr. Vertegans, Chad Valley Nursery, third; and Mr. Jennings, Shipston-on-Stour, fourth.

For 12 varieties, the competition was likewise local. Messrs. Perkins were again first; Mr. Vertegans, second; Mr. Pope, Gib Heath, third; and Mr. J. Jackson, fourth. Some good blooms were exhibited in these divisions.

In the Amateurs' class, the best 48 came from the Rev. P. M. Smythe, Solihull, and most excellent they were. Among them were beautiful examples of Gloire de Dijon, *Senateur Vaisse*, *Manrice Bernardin*, *Duchesse de Cynas*, *Vicomte Vigier*, *Madame Knorr*, *Marcelle Niel*, *Mrs. Rivers*, *Louise Magnan*, exquisite; *Prince Camille de Rohan*, and *Madame Boutin*. Mr. C. J. Perry, of Castle Bromwich, was second, and his name is too well known in connection with the Rose to render it necessary to say that he, also, exhibited very fine blooms; indeed, he pressed the Rev. P. Smythe very closely. *La Brillante*, *Gloire de Dijon*, *Duc de Rohan*, *Madame C. Joigneaux*, *Charles Lefebvre*, *Acidalie*, *Senateur Vaisse*, *Laurent Descomet*, *Maurice Bernardin*, *Paul De la Meilleraie*, *Général Jacqueminot*, *Madame Victor Verdier*, *Madame W. Paul*, very rich in colour, and *Mrs. Rivers*, as shown by him, were excellent. Mr. Brown, gardener to Mrs. Alston, Elmdon Hall, who was third, had also several varieties in great excellence.

In 24 trusses, the Rev. P. M. Smythe was again first. His *Duc de Rohan*, *Beauty of Waltham*, *Caroline de Sansal*, and several others were most excellent. Mr. Hunt, of Leicester, was second; Mr. Perry, third; and Mr. Brown, fourth.

In the division for 18 varieties, Mr. Perry was first, showing beautiful examples of *Gloire de Dijon*, *Général Jacqueminot*, *Prince Camille de Rohan*, *Madame Julie Daran*, *John Hopper*, *Senateur Vaisse*, *Charles Lefebvre*, and *Madame Charles Wood*; Mr. Hunt, of Leicester, being second, and Mr. Chawner, Lichfield, third with very good stands.

For 12 varieties, Mr. Brown was first; Mr. Perry, second; Rev. P. Smythe, third; Mr. Hunt, fourth.

In the divisions for 24 and 12 varieties, open to residents within fifteen miles of Stephenson's Place, Birmingham, the prizes were taken in the former by the Rev. P. Smythe, Mr. Brown, Mr. Perry, and Mr. Cooper; and in the latter by Mr. Brown, the Rev. P. Smythe, Mr. Perry, and Mr. Cooper. In the divisions for 12 and 6 varieties, open only to amateurs residing within four miles of Stephenson's Place, Mr. Cooper, gardener to Miss Anderton, Moseley, was first in the former; Mr. Allen, gardener to W. Mapplebeck, Esq., second; and Mr. Lowe, Edgbaston, third; and in the latter Mr. Cooper was also first; Mr. Winn, Selly Oak, second; and Mr. Allen, third. Messrs. Smith, Parnell, and Sarrington also took prizes in a division for amateurs who had never before won a prize. In the different stands shown in the above divisions there were many most creditable blooms.

New Roses were not very numerous shown. The best 24 came from Mr. Keynes, whose blooms were excellent. Of these the finest were *Mlle. Marguerite Dombain*, *Madame Fillion*, *Mlle. Marie Rady*, *Prince de Poëria*, *Alfred Colomb*, *Abel Grand*, *Charles Ronillard*, *Josephine Beauharnais*, and *Hippolyte Plaudrin*. Messrs. Paul and Son were second; the finest in their stand of those not already mentioned were *Thorn*, bright pink; *Exposition de Brie*, *Madame Hoste*, and *Frederic Biborel*. Among the 24 from Mr. Cant, who was third, Dr. Andry, *Duchesse de Medina Coli*, and *Jean Lambert* were fine. For six trusses of any new Rose sent out in the spring of 1865, 1866, or 1867, Messrs. Paul & Son were first with *Alfred Colomb*, and second with *Exposition de Brie*, whilst Mr. Keynes was third with *Marguerite de St. Amand*, and fourth with *Princess Mary of Cambridge*. Mr. Turner's seedling *Miss Ingram* was also shown.

In other divisions Mr. Vertegans exhibited Moss Roses in good condition; Messrs. Paul & Son the same, also Summer Roses, and beautiful trusses of Tea and Noisette varieties. Vases, baskets, and some beautiful bouquets of Roses were also exhibited. The first prize for a vase was taken by Mr. Cole, of Birchfield; the second by Mr. Vertegans. T. Lloyd, Esq., received a first prize for the best design for ornamenting an entrance hall; it was simply a large pyramid of Roses. Mr. Vertegans was second with a basket tastefully filled. Of bouquets, the best came from Miss Cole, of Birchfield, and Miss Mort. Both were very pretty. Among dinner-table decorations there were also some pretty designs. The prize was awarded to Miss Evans, The Mount, Shrewsbury, and most deservedly so. The base was circular and covered with *Lycopods*, edged with Ivy, and having a few Roses dotted over it. From the base rose a twisted rustic stem, entwined with small-leaved Ivy, and supporting a wooden circular top-dish covered with *Lycopods*, and containing Moss Roses, surrounded by white odes, together with Grasses and Maiden-hair Ferns. Miss Mort's second-prize arrangement was also pretty.

Along the centre of the tables were ranged specimens of the pretty variegated *Acer Negundo*, *Colens Verschaffelti*, and other plants; whilst beneath the orchestra Mr. Jephete, of Balsall Heath, and Messrs. Felton & Holliday exhibited Ferns and ornamental-leaved plants. Mr. Watson, of St. Albans, also produced his fine *Tricolor Pelargonium* Mrs. Dix and Miss Watson; and Mr. Cunningham, The Forge, Burton-on-Trent, the pretty variegated Ivy-leaf, called *L'Elegante*. A stand of new Verbenas, from Mr. C. J. Perry, must not be passed over. It contained James Birkbeck and Miss Turner, two fine varieties, which have been noticed in another column; In-

teresting, salmon pink, with a white eye; *Sunbeam*, salmon rose, and others. Messrs. Perkins, of Coventry, also exhibited a collection. As usual, there was a good display of wirework, garden ornaments, and cutlery.

THE NEW PEAS.

(Continued from Vol. XII., page 449.)

THE Fruit and Vegetable Committee of the Royal Horticultural Society continue their experiments at Chiswick, and the following is a report of the conclusions at which they arrived at their meeting on Tuesday:—

Princess Royal, second early white Marrow, is a first-class Pea, from 2 feet 6 inches to 3 feet high; pods large and broad, with from seven to eight Peas in each, of excellent quality; vigorous constitution, and abundant bearer. The ripe seed is large, smooth, round, slightly indented, of a very clear whitish appearance.

Cattell's Kent Rival is identical with *Princess Royal*.

Somersetshire Early Prolific is very similar to the old White Prussian. It is a small round white Pea, about 2 feet high, tolerably prolific, with small but well-filled pods.

Peabody is another Pea of the same class, about 18 inches high, not of any merit.

Laxton's Prolific Longpod is very similar to and no improvement on *Prizetaker*; about 5 feet high, with large, full, deep green curved pods. An abundant bearer. Sample somewhat mixed with a white variety having the same general appearance.

Green Prolific (Froggat), is *Prizetaker*.

Green Marrow (Wrench), larger sample, with broader and larger pods, and a somewhat stronger grower than the old *Green Marrow*. A very good Pea.

Hannaford's Favourite is a much-mixed stock of *green Marrow* Peas of no merit.

Blue Excelsior and *Knight's Blue Emperor* are identical; a second early green Marrow, about 5 feet high, with fair-sized pods of a pale green colour; very prolific. It resembles in general appearance when growing the *Champion of England*. Ripe seed of an olive green colour.

Early Surprise is somewhat larger than, and an improvement on *Blue Excelsior*. A very good Pea.

Carter's Improved Scimitar is a good stock of *Scimitar*.

Carter's Surprise, a *Blue Imperial*, of the same style as *Scimitar*, about seven days later, with straighter pods; very prolific.

Wonderful (Maclean's), white wrinkled Marrow, is a first-class Pea, about 3 feet high, with fine, large, well-filled pods; excellent flavour. An abundant bearer, and of vigorous constitution.

Prolific (Maclean's), white wrinkled Marrow, rather dwarfer than *Wonderful*, very prolific, fine flavour, and most excellent.

Nelson's Vanguard, white wrinkled Marrow, two days earlier than *Alliance*, pods rather short, does not fill well, very prolific.

Nutting's No. 1, wrinkled, is identical with *Sudbury A1*. An excellent early white wrinkled Marrow, three days earlier than *Alliance*, with larger and better-filled pods. An excellent Pea.

Little Gem (Turner), blue wrinkled Marrow, is a very fine Pea, from 9 to 12 inches high, abundant bearer, and of first-rate quality. A few days later than *Sangster's No. 1*. Exceedingly good for pot-culture.

Mutum in Parvo (Nutting), resembles *Little Gem*, is the same height, but has somewhat broader pods, and is a few days later than that variety.

Nutting's Early Seedling is another Pea of the same class, as early, but taller and with somewhat broader and shorter pods than *Little Gem*. A good Pea.

Princess of Wales, green wrinkled Marrow, is very similar to *Advancer*, a few days later, and with somewhat smaller pods; prolific. Ripe seed light green.

Premier is a first-class green wrinkled Marrow, about 3 feet 6 inches high, with fine large pods and Peas of excellent quality; rather later than *Veitch's Perfection*, vigorous constitution, and abundant bearer.

Smithies appears to be an indifferently selected stock of either *Veitch's Perfection* or *Premier*.

Laxton's Leader is very closely allied to, but no improvement on *Veitch's Perfection*.

Dickson's Yorkshire Hero, green wrinkled Marrow, is very similar to *Maclean's Hero*, dwarfer, and three or four days earlier than *Veitch's Perfection*, vigorous constitution, and very prolific.

Maclean's Hero, green wrinkled Marrow, is a few days earlier and dwarfer than Veitch's Perfection. A prolific and very good Pea.

The Prince (Stuart & Mein), green wrinkled, is a first-class Pea, with a fine vigorous constitution, from 3 feet to 3 feet 6 inches high, producing large well-filled pods. An abundant bearer, and very fine Pea, three or four days later than Veitch's Perfection.

Green wrinkled Peas (E. G. Henderson), resembling, but no improvement on Veitch's Perfection.

Lord Palmerston is identical with Veitch's Perfection.

Laxton's Champion (green wrinkled Marrow), is no improvement on Veitch's Perfection.

Prince of Wales, green wrinkled Marrow, about 3 feet high, very prolific, smaller podder, and a few days earlier than the Prince, or Veitch's Perfection.

Fortyfold and Fairbeard's Fortyfold, green wrinkled Marrow, are identical, three to four days later, and with larger pods than Champion of England, evidently selected from that variety. An excellent Pea, height 6 feet.

Pearce's Gardeners' Delight is identical with Ne Plus Ultra.

Knight's Albert Edward is Ne Plus Ultra.

Strathmore Hero, Competitor, and Mote Marrow are the same as Tall Green Marrow.

TABER'S EARLY PERFECTION PEAS.

SEEMING that the Early Pea controversy has been already resumed in your pages, I may, perhaps, be allowed to record my experience of the above variety. At the outset, I have to state that I obtained the seed from Mr. R. Dean, seedsman, of this place, as he had his supply direct from Mr. Taber, owing to its being reported that there was a spurious stock in the market. A near neighbour of mine operated at the same time with Sangster's No. 1, said to be from a "pure stock" obtained from a reliable source. We sowed at the same time, soil and position being of a similar character in each case. By some days Taber's was the first to bloom, to set, and to yield a picking—not merely a few pods, but a good picking.

The foliage of Taber's is of a much darker green than Sangster's, and, indeed, any other early Pea I have yet grown. It appears, also, to be of a remarkably hardy constitution; for while Sangster's appeared to "wince," and that considerably under the effects of the late frosts, Taber's came out of the ordeal unscathed; Raspberries growing close by had the entire crop destroyed. The haulm grew from 2½ to 3 feet high, and yielded fine and well-filled pods from bottom to top. I obtained several good pickings, not two or three merely, as is usually the case with early Peas. I say nothing about flavour, as it is simply a question of hair-splitting.

What is required in an early Pea is a hardy constitution, a dwarf branching habit, yielding freely pods in pairs, which should contain from six to eight Peas in each. These essentials I find to be more characteristic of Taber's Early Perfection than any early variety I have yet tried, and I cordially commend it to my brother amateurs as a good variety, and well worthy of their attention.—H. A. STEPHENS, *Ealing*.

RHUBARB.

A NEW GIANTIC VARIETY—CULTURE—COOKERY.

MR. MILLER, nurseryman, of Andover, informs me that one stalk of this variety which I forwarded to him recently weighed upwards of 3 lbs., stalk and leaf together. I had previously ascertained that they measured in all somewhat more than 5 feet in height, while the edible part of the stalk was 2 feet 9 inches long, and 6 inches in circumference. The circumference of the leaf was 13 feet.

As there may be some doubt of its being a seedling from the Victoria, owing to the difference of habit, I beg leave to state that there can be no mistake on that head.

The only varieties from which I have ever saved seed for sowing have been the Victoria and the Albert, and I have taken great care to have no other variety in flower at the same time.

The seedlings from the Albert I have found to possess a very distinctive character: round, smooth, and succulent in the stalk; smooth and fleshy in the leaf, and this always round, never peaked; and in all of these respects different from those of the Victoria.

With regard to the variety to which I now direct attention, following the plan stated in a paper on the cultivation of

Rhubarb, which the Royal Horticultural Society gratified me much by publishing in their "Transactions" some years ago, I was struck with the difference of its appearance from that of other plants raised from seed growing on the parent stem, and saved and sown at the same time while it was yet in the seed-pod, and almost immediately on its appearing above ground.

In consequence of this, at the proper season, I selected it from among the others, and planted it in a situation where I could observe its progress. The result is the present variety. Allow me to remark, for a reason which will immediately appear, that the longevity of the Rhubarb is somewhat marvellous. I found in my garden here a bed of what, in every respect except in want of colour, is a very excellent variety. For more than forty years I have, every season, gathered from it for use, and this season found it in a state of more vigorous growth than it was when I began to do so. After saying this, I need hardly add, that it has been well manured, and that it never has been forced.

The effect of forcing in weakening and injuring this plant is scarcely less remarkable than is the length of time during which it retains its health and vigour when this is not done, and when otherwise not properly treated. In this case the Rhubarb may, indeed, be considered not merely a perennial, but almost, if not altogether a perpetual plant. The bed above referred to, I know for certain was planted fully eighty years ago. Contrasted with this, I may mention that I had a very excellent seedling variety growing to a very large size. This I forced for two, but it may have been for three years consecutively. The consequence has been that, although the last time this was done was many years ago, it has never yet, and probably never could recover the injury caused by this weakening and exhaustive process. In its present dwarfish appearance no one could recognise, if they had seen it, the original vigorous and healthy plant.

The inference I draw from this is, that except where the plants are in sufficient numbers to sacrifice those operated upon, Rhubarb never should be forced. Where the quantity is moderate, and a sufficient supply for household use is required at the natural season, forcing is a practice that ought never to be followed.

With regard to its general management, I should say that, judging from my own experience, Rhubarb, in one respect, resembles the soil in which I have grown it: the remark, however, applies to the soil of North Hants in general. This, if left to its own natural resources, is too poor to show itself generous. It is, however, just and grateful, always giving back in proportion to what it has received. The Rhubarb plant will do the same. It will always, within reasonable bounds, make a return according to the care and the expense bestowed on its cultivation.

Acting upon this at the end of every season when the growth is entirely over and the decayed leaves removed, I give it a good dressing of short, well-made stable manure, mixed with superphosphate of lime and wood ashes.

Having allowed this to receive the autumn rains, so as to carry the fertilising principles down to the roots before the early frosts come to cool the ground, I cause the whole to be covered with a thick coat of leaves, remaining through the winter, impervious to the cold.

Of the success of this mode of treatment I certainly have had no reason to complain. It is now a good many years since I gave up raising Rhubarb from seed. Having, however, retained what I had planted out while experimenting in that way, under the management described, the quantity I have in my garden never fails to call forth an expression of surprise from those who see it, with a look, which seems almost to say, "Is it not foolish to devote so large a space to the cultivation of a single plant?" All I say on this head is, that were the quantity quadrupled I could find use for it all.

Coming at a season when no kind of fruit is to be had, my poorer neighbours are most thankful to receive it, and never tire of it for their Sunday puddings. To some of my richer neighbours it is equally acceptable, they not understanding, or not going to the trouble in its cultivation. The latter value it for the purpose of making a preserve, for which some of my varieties, from their superior flavour, are admirably adapted. These, I may mention, are all from the Victoria. In giving it for the latter purpose, I always request my friends to give their cook strict injunctions not to remove the skin. In doing this, along with the fibres that are attached to it, they deprive the Rhubarb of almost all its colour, and of a great part of its

flavour. While injurious in this respect, the practice, which originates in ignorance, is otherwise quite unnecessary. In all stages of its growth the skin and fibres are, when dressed, quite tender, while in the process of preserving they are entirely dissolved away.—CHARLES MACKIE, *Quarley Rectory, Andover.*

POTATOES—EDGING FOR STRAWBERRIES.

SEEING an article on Potatoes in your Journal last week (June 27), can you inform me where Myatt's Kidney was raised, as it has done well with us, though we have had severe frosts, and been three weeks later than usual in planting? The crop has turned out well for all that, and I do not think there will be many second early Potatoes in the ground after this week. We have sold off our last lot at 2s. 9d. per peck, which is a good price so late in the year.

We had round the garden a large amount of old Box-edging, which I found harboured snails. We took it up, and in its place planted our Strawberries round the walks, and then to keep the soil, which is light, up to them, we procured some of the very largest oyster shells we could find, and have stuck them all round the edge—viz., a round one, and then a flat one, with the white inside to the walk. Besides keeping the Strawberries clean and off the ground, they do better than anything I have tried before, and look neat.—INDEX, *Wallasey, Cheshire.*

THE YUCCA AS A HARDY DECORATIVE PLANT.

THE Yuccas should never be planted in a bleak or exposed situation—in such positions they will only exist as unsightly fragments; but give them shelter and deep soil, and we cannot find more effective decorative plants. Wherever artistic arrangement is attempted in the flower garden, the Yucca will prove an invaluable plant. In the most beautiful villa garden I have yet seen the Yucca forms a leading feature in the summer decoration. In the panel system of planting borders—so happily introduced at Archerfield—the Yucca will come into great account; but it is in the large flower garden that the grand and diversified characteristics of the Yucca will be fully appreciated, and there I will leave the Yucca to be arranged by the correct taste of Mr. David Thomson, who is so charmingly working out of chaos a system of flower gardening which will raise the whole subject to a higher status of art and enjoyment. I will here crave a word for the genus Yucca as rock-plants. A clever writer in a contemporary some time ago wished the Yucca put out of the list of rock plants as being unsuitable. I fear the writer had never seen the Yucca on cultivated rock-work; had he seen the *Y. glaucescens* in the autumn months, with its large pyramidal racemes of creamy white flowers rising up through masses of quartz rock, he would have looked upon it as a crowning beauty to rockwork. If any one set about planting a Yucca on rockwork in a position only suitable for Sedums or Saxifragas, a few flaccid leaves will be the result; but give proper depth of any adhesive soil with moderate shelter, and I will engage that the Yucca will present features bold and picturesque, with such outlines and pyramids of blossom as have never been seen on rockwork in the British Isles with any other genus of plants. The Yucca will thrive on any soil, if deep, with a dry bottom; the strong-growing sorts, as *Y. gloriosa*, grow more robust on loam—the richer the better. The fine graceful leaves of *recurva*, with the obtuse ribs developed, are highly ornamental when the plant is grown in rich land. The varieties of *filamentosa*, I find, do best and flower more abundantly in peat earth. The variegated variety of the last named is a most charming plant, and when it can be bought in quantity at a reasonable price will be a great acquisition in out-door decorative plants; when grown in heat this elegant plant has no rival in its style for dinner-table work.

The propagating of the Yucca is simple and easy, but to wait the natural increase of suckers from out-door culture is weary work when quantity is required. In large nurseries the common varieties can be purchased at moderate cost; there are, however, many who love such things, but are necessitated to rely upon home resources, and it may interest some if we state here that, with a common frame with a little bottom heat, a nice stock of Yuccas can be got up. If suckers can be got they will quickly root, and are at once effective plants. The knaurs will also make good plants, although not so quickly; these will be found growing on the stem and roots underground upon old plants;

they should be cut carefully off and potted—much like Vine eyes—in any light rich earth, covering them about 2 inches, and making the soil rather firm in the pot. Very little water will be required until the green leaves appear above the surface, when plenty should be given.

A word more on winter protection. In districts where much snow falls the large sorts must be lifted, or protected by wooden screens. I have seen conical hoods made of strong willows which have lasted years, and protected a fine collection of Yuccas. The shelter of any open shed will be the best of quarters if the plants are put in earth and not too close together.

We give no protection to Yuccas here (Kilkenny), as very little snow falls. When snow does fall in any quantity it is carefully shaken off the plants with switches. The past severe winter did not in the slightest injure Yuccas here, with the exception of some young plants of species unknown as to name.—CHAS. McDONALD (*in Gardener.*)

DUTY-FREE TOBACCO.

THE question of duty-free tobacco is meeting with the attention it deserves, and the readers of THE JOURNAL OF HORTICULTURE are under an obligation to the Editors for their kindness in opening their columns to the discussion of a subject of so much importance to the gardening and agricultural world. Numerous as are the patent powders, washes, and fumigators annually introduced to the public, it is generally admitted that tobacco has advantages as a wash and for fumigating which nothing else possesses. In fact, its only disadvantage hitherto has been the high price, owing to the very heavy duty levied upon it. It may appear to some that the Government has been too restrictive in this matter; but when the enormous revenue derived from tobacco is considered, it will be evident that the Lords of the Treasury have a serious trust to guard, and that they may not without extreme risk of fraud permit any departure from the beaten track. Still, the Government has not been averse to granting concessions when it could safely do so; and when it was suggested that tobacco juice would prove of value to the farmer and stock-breeder, as a dip or dressing for sheep, the Lords of the Treasury sanctioned the use of tobacco for that purpose, provided certain ingredients were added to protect the revenue against fraud. The consequence has been that tobacco juice for sheep-wash is now a recognised article of commerce, and large quantities are used in this country, whilst it is also a considerable article of export.

Somewhat later an agitation, promoted by Mr. Bannerman, of Staplehurst, and Professor Voelcker, of the Royal Agricultural College, secured for Hop-growers the further permission to use duty-free tobacco juice as a Hop-wash; but as the ingredients added to the sheep-wash tobacco juice rendered it unfit for Hops or plants, the protection of the revenue in the use of the Hop-wash had to be attained by staining the tobacco juice with extract of logwood, and this Hop-wash so stained or adulterated with logwood is now widely used.

At this point the Richmond Cavendish Company took up the question, with a view to obtaining the sanction of the Treasury to manufacture tobacco specially for fumigating. Forms of petition were distributed throughout the British Isles, and I have no doubt many of your readers will remember aiding the Company by their signatures. The opinion of the Government chemist, Professor Phillips, however, was against the form of our proposal, so that the attempt to get duty-free tobacco failed in that instance.

The next and successful application to the Government was made by Dr. Newington, a gentleman described by your correspondent, "OBSERVER," as "the inventor of the ground and cylinder vineries." This was to prepare what is now termed "ground tobacco," consisting, according to the Government formula, of seventy-five parts of finely powdered tobacco, twenty-five parts of sulphur, and five parts of assafoetida. This preparation of tobacco is chiefly designed to dust the Hop-bine, but it may be used in almost every form, whether in or out of doors, both as a powder and as a wash. The smell of the gum assafoetida is very offensive to most persons. However, that is a minor evil when compared with the ravages caused by the insect life the powder is calculated to exterminate; and although the ground tobacco is unsuitable for fumigating, owing to the presence of the sulphur, it cannot fail to be of great service to gardeners and farmers for general purposes. Mr. Tyerman, the Curator of the Liverpool Botanic Gardens,

speaks highly of the efficacy of the powder as the basis of a wash, and many gardeners recommend it to dust strong-growing plants, which would otherwise be ruined by the grub or fly.

It is, no doubt, true, as Mr. Gosse remarks, that this powder is of "no avail for houses in which costly or delicate plants are grown," for I apprehend that so large a proportion of sulphur as twenty-five parts would be fatal to the organisation of delicate plants. The objection to sulphur applies also to cayenne, as suggested by your correspondent, "G. S.," unless used in very minute quantities. Moreover, cayenne would not be a sufficient protection for the revenue.

The Government has already conceded so much, and the Lords of the Treasury have shown such willingness to meet the wishes of horticulturists, that there is no doubt duty-free tobacco for fumigating in some desirable form will ultimately be granted, and there can be no surer way of bringing this about than by securing the valuable assistance of the public press. Public discussion will gradually expose the bearings of the question, and lead to a success which is at present denied to private assiduity. It cannot be a very difficult thing to devise a form of tobacco which will be equally acceptable to the revenue and to the gardener. To this end I shall be most happy to place my services at the disposal of any of your correspondents who feel an interest in the matter, and I will willingly carry out and report upon any experiments they can suggest as calculated to secure the boon of duty-free tobacco for fumigating purposes.—J. F. TAFE, *Secretary, Richmond Cavendish Co., Liverpool.*

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

DRABA VIOACEA (Violet-coloured Draba).—*Nat. ord.*, Cruciferae. *Limn.*, Tetrastylis Siliculosa. Native of the Andes, near Quito, at an elevation of 13-15,000 feet.—(*Bot. Mag.*, t. 5650.)

IPOMŒA GERRARDI (Gerrard's Ipomœa).—*Nat. ord.*, Convolvulaceae. *Limn.*, Pentandria Monogynia. Native of Natal, where it is called "Wild Cotton." Flowers white, opening in August, in a moderate stove.—(*Ibid.*, t. 5651.)

RUNGEA MACROPHYLLA (Large-leaved Rudgea).—*Nat. ord.*, Rubiaceae. *Limn.*, Pentandria Monogynia. Native of Rio Janeiro. A magnificent shrub. Flowers white.—(*Ibid.*, t. 5653.)

EPIDENDRUM COOPERIANUM (Mr. Cooper's Epidendrum).—*Nat. ord.*, Orchidaceae. *Limn.*, Gynandria Monandria. Native of Brazil, probably near Rio Janeiro. Grows readily in the Cattleya-house, but should be tried in the Mexican-house. Flowers brownish yellow with pink lip.—(*Ibid.*, t. 5654.)

GLOXINIA HYPOCYRTIFLORA (Hypocyrta-flowered Gloxinia).—*Nat. ord.*, Gesneraceae. *Limn.*, Dindynamia Angiospermia. Native of the forests of the Andes, near Quito. Introduced by Messrs. Veitch. Very beautiful dark green velvety leaves, silver-veined; flowers yellow, scarlet tipped.—(*Ibid.*, t. 5655.)

VARIETIES OF AMARYLLIS.—*Henry Gibbs*, white with crimson stripe. *Helén*, crimson self.—(*Florist and Pomologist*, vi., 141.)

NOTES AND GLEANINGS.

AN International Horticultural Exhibition will be held next year at Ghent. It will be opened to the public on the 28th of March, and continue open until the 4th of April. We shall notice it more fully when the programme is published. In the meantime any one wishing for information may apply to the Secretary, M. Edmond Claus, Rue Digue de Brabant, No. 20, Gand, Belgium.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Broccoli, plant out, likewise *Cauliflowers*. **Celery**, the principal secret in growing very tender and crisp Celery, irrespective of size, is to sow it rather late, and to grow it very quickly by means of plenty of manure and moisture. **Cabbages**, some early sort may yet be sown for winter and spring Coleworts. **Leeks**, let a good planting be made immediately, using as much manure as for Celery. Endeavour to plant out good breadths of Celery forthwith. What is called the Scotch plan is preferred—viz., beds of from 4 to 6 feet in width. These beds, which generally succeed crops of Peas, are trenched two spits deep. The bottom spit has plenty of raw manure or half-rotten

leaves and the top old manure. **Shallots**, those inclined to ripen should be raised slightly with a Potato-fork in order to admit air to counteract mouldiness. **Turnips**, let a good breadth of autumn Turnips be sown without delay, choosing for the kitchen garden the Dutch or Stone. **Tomatoes**, pinch off the tops and keep the shoots regularly thinned, for if once these are allowed to become confused, the condition of the plant is deteriorated by the severe cutting which then becomes necessary.

FRUIT GARDEN.

Attend to Pear trees against walls, and see that the leaves on spurs and at the bases of the shoots are of a healthy dark green colour, which will not be the case if they are too much shaded by any superabundance of foreright shoots. The fruit and the leaves immediately connected with it should likewise be sufficiently exposed. Follow up, therefore, the gradual mode of reducing the shoots previously recommended. Where several shoots have sprung up close together, or from around the base of a shoot cut back in a former season, they ought to be thinned, and they cannot be taken out too closely with the exception of one or two, which should afterwards be spurred to about 3 inches. Continue to lay in the young shoots of Peach trees, and also those of other stone fruit. Shoots of Peaches and Nectarines having fruit at their bases may be shortened to within 3 inches from their origin. Examine the soil near the bottom of well-drained or naturally dry borders, and if found necessary let the whole be thoroughly watered. Showers may keep the surface of the ground moist and the foliage healthy for a time, but the latter will not long continue so if there is dryness below. Bud Cherry and other fruit trees as their state of vegetation is found suitable. Have an eye to Strawberry runners for forcing or other purposes. The Elton is invaluable for late work.

FLOWER GARDEN.

The late abundant rains which have, according to the papers, been general, will furnish a good opportunity, if the time can be spared, for a thorough rolling of lawns. An English lawn is ever reckoned an object of admiration, and thorough rolling is necessary both to preserve its beauty and to facilitate the business of the mower. China Roses that are going out of bloom should be carefully pruned, cutting out as much of the old wood as can be spared, and shortening back all young shoots out of flower. By this means they will produce a fine show of bloom again in autumn. Continue to bud Roses and to remove dead flowers as they appear. Tie-up Pinka, Carnations, Sweet Peas, &c. Hoe the surface of beds and borders; it keeps them cool and moist, and prevents weeds from appearing. Look over choice shrubs and trees; if any of the latter have formed more than one leader, they should be pruned off at once. This should be strictly attended to with Pinuses. The most forward Carnations and Picotees may now be layered. They should be layered in light soil, consisting principally of leaf mould. Those shoots which apparently will not become sufficiently strong may be taken off, and treated in the same way as Pink pipings. Remove all misshapen blooms of Dahlias, and place round the main stem neat stakes to which the lateral shoots may be attached. Continue to put in pipings as well as cuttings of Pansies.

GREENHOUSE AND CONSERVATORY.

Large climbers with other specimen plants of considerable size are liable to become pot-bound, and as it is not always expedient to give them a thorough shift, it is a very good plan to sink the pot into another which is somewhat larger. The pot selected should be thoroughly drained, and fibrous heath soil and loam in lumps, with charcoal and pounded crocks, should be laid over the drainage before placing the plant. The rim of the pot inserted may be elevated about one-third of the pot's depth above that of the exterior pot. This will give room for the prepared compost. After placing it perfectly level the space between the two pots may be filled up with the same coarse materials. This space affords a good chance of introducing stakes or trellising without injury to the roots. Large plants which were thus treated four years ago are still thriving, having been constantly fed with liquid manure during the growing season. Camellias may be shifted at this season. It is an excellent plan to perform this operation the moment that the flower-bud is decidedly formed. As compost, we would recommend two-thirds of fibrous loam of an unctuous character, and one-third of fibrous heath soil. The more fibrous and lumpy it is the better, and a good sprinkling of charcoal in small masses, with sharp silver sand, should be added. Let the pots be most completely drained by placing some large

crocks in a very hollow position at the bottom, and over these a pounded mixture of broken crocks and charcoal from which all the very small particles have been riddled. Cover this with very fibrous turf in small lumps before placing the ball, and keep pressing, not ramming, the material close with the fingers during the process of filling-up, observing to have the compost in a mellow state rather inclining to dryness. One most material point is to see that the ball is thoroughly moistened before shifting. If any doubt of this exists let the ball be steeped in water for a quarter of an hour previous to potting. In the greenhouse some of the *Statice*—as *sinuata*, *puberula*, &c., exhausted with blooming, may be shaken out of their pots and repotted. These plants delight in an open compost with thorough drainage, and some of them are partial to a close and moist atmosphere. Stop gross shoots of the greenhouse *Azaleas*, and see to cuttings of the best *Pelargoniums*. The earliest-sown plants of *Primula sinensis* may now receive their final shift. These will blossom through October and November when flowers will be scarce. Continue to pinch off blossoms from pot *Roses* intended for flowering in November and December, and stop every luxuriant shoot. Young stock of these for winter work should now have their final shift.

STOVE.

Some of the *Bletias* and also the old *Phajus grandifolius* are well adapted for producing winter flowers. Such should have their growth completed with all possible rapidity; they enjoy abundance of liquid manure. Keep the old shoots of the *Russelia juncea* cut away and healthy shoots trained in their place, and beware of the green fly. Stop the shoots occasionally of the young plants of *Euphorbia jacquiniæflora*, they will produce a succession of somewhat later blooms. *Thunbergia* seedlings having been provided, they should have most liberal shifts and receive a good staking or trellising in order to secure healthy specimens throughout the autumn, and perhaps the winter. Two or three plants in a mass (one of each colour), produce a pretty effect.—W. KEANE.

DOINGS OF THE LAST WEEK.

THE bright sun and the high temperature were followed on the 3rd and 4th by copious rains that did good to everything, except the hay which was exposed. Even *Strawberries* were much benefited, as the rain saved the trouble of watering them, and gave them all a thorough washing and cleansing without in our case doing any damage to the fruit, as the ripest had been closely gathered. The rains were also a great drawback to some country exhibitions of flowers, &c., for which great preparations had been made as out-door fêtes. We are happy to learn that owing to the kindness of the possessors of the grounds, some of these were continued on the following day, and thus the societies would suffer less than expected. In the uncertainty of our climate, an out-door fête is as likely to mar as to make a horticultural society, and should only be ventured on when the funds are strong. So far as we know, in country towns where many young people reside, sufficient advantage has not yet been taken of the practice of keeping the exhibition open in the evening, when many would attend who cannot afford to lose time and pay for entrance as well.

KITCHEN GARDEN.

Opportunity was taken to plant out a good breadth of *Brussels Sprouts*, *Borecoles*, &c., and we must prick out and wait until we have more ground at liberty. We lately spoke of planting *Potatoes* in rows 2½ feet apart, and then 18 inches, in the hope of planting undercrops between the wider rows, but owing to the damp character of the season the *Potatoes* have become too strong to permit of the plan being carried out to any considerable extent. Such a season shows the advantage of such kinds of *Potatoes* as Veitch's *Prolific Ash-leaved*, in small gardens, sorts which make but small tops and are soon ripe and off the ground to make way for *Cauliflowers* and *Winter Greens*.

Some people complain that though the skins of *Potatoes* are as firm as ever they will be, yet if tubers are taken up and housed they soon lose the exquisite flavour which a ripe *Potato* has when taken at once out of the ground to be cooked, in June and July. That flavour may be well preserved if, instead of being exposed, the *Potatoes* are hedged and covered over with dry earth, and then picked out as wanted. Where there is plenty of room, *Potatoes* may be sorted into sizes before this covering, and then there is no difficulty in picking out an extra good dish. Even long before *Potatoes* are ripe, when the skin hangs in ribbons about them, or would all come easily off when

rubbed with the hands in water, the tubers will be much enjoyed by many if they are cooked at once; but all such *Potatoes* lose their sweet flavour, and instead of being crisp and sweet become leathery and tough, when kept long before being used. They will be improved by being kept covered with earth as above stated; but even that will not give them the flavour of those newly taken from the growing plants.

Long before *Potatoes* could be obtained in the open ground, unless, perhaps, from those forwarded a little at the foot of walls, the market towns in our neighbourhood were supplied with new *Potatoes*, at moderate prices, from the Channel Islands; but though a change in food was thus obtained, the tough tubers bore no comparison with good old tubers of the *Fluke* or *Jersey Blue*. *Green Peas* were also supplied from the same parts, a few were said to be brought from the south of France, and even from *Algiers*, and though the *Peas* were green and in pods, and were a rarity to many, everything like delicacy of flavour had long departed. In fact, as one recommendation to the holding of even a small garden, we make bold to say, that except by obtaining these vegetables, and even a *Cabbage*, a short time before being cooked, it is impossible to secure their rich crispness and flavour.

Greening Potatoes.—One word in the way of inquiry. In the case of early *Potatoes*, and as respects the first crops especially, it was found to be a good practice to raise the *Potatoes* before they were dead ripe, and expose them to sun and air until they were pretty well greened. This was no doubt done on the principle that seeds, young and not over-ripe, vegetate more rapidly and strongly than older or better-ripened seeds. The reasons have frequently been adverted to when alluding to the processes of germination. At any rate, we had long satisfied ourselves as to the propriety of thus greening *Potatoes* intended as the seed for early crops; but last season, contrary to usual experience, we heard from many quarters that whilst the tubers of early kinds intended for planting were much injured by the disease in the autumn and the beginning of winter, though housed in fine—apparently first-rate condition, yet that those thus greened by free exposure before housing were rather the worst affected by the disease. This was so contrary to our usual experience and observation, and so opposed to all we should have expected, that before recommending the greening process to our amateur friends we would be glad to receive more definite information on the subject.

Dwarf Kidney Beans.—We have sown the last crop in the open air. By the time this is read we will sow in an earth pit—that is, a bed with a low wall of earth back and front, with a green sod on the top of it, and then when the cold nights of October come, we can put on old sashes and hurdles at night. From such a pit last year we gathered up to the middle of November. Most likely about the end of the month we will sow in good-sized pots in the open air, and when the cold nights come, put the pots under glass, and the plants will bear much better than those sown later in heat.

Peas.—Sowed several times within the last fortnight, and what we consider will be the last crop, on the 3rd of July. We have sown them on the same border on which our earliest *Sangster's No. 1* are still producing, though better kinds are now in. They had been planted out in rows 3½ feet apart, with *Spinach* and *Radishes* between the rows, these had been pulled up some time, and laid close to the *Peas* to keep the draught from the roots; now the ground between has been forked over, the *Peas* sown—*Sangster's* and *Dillistone's*—and by the time they are high enough the sticks that did for the first crop will do for the last, and the haulm of the first be removed. We have never done much good by sowing later in the open air, but we have had *Peas* almost up to Christmas by sowing in pots in the beginning and middle of August, and placing the pots under glass by the end of October; but, unlike early *Peas*, these late ones were hardly enough thought of to be worth the trouble and labour. We recollect being much mortified when told that a gentleman when partaking of them in December—and who was a little celebrated for his taste in these matters—wished to know from his host how he managed to preserve his *Peas*; so that little credit was given to the grower for plucking them fresh from the plants.

FRUIT DEPARTMENT.

Strawberries.—As soon as possible we must layer runners for forcing. We saw lately a fine crop of *Empress Eugénie*, a large dark *Strawberry*, and seemingly bearing as freely as *Keene's Seedling*, the best *Strawberry* for general purposes. The most of our forced plants last year were not layered at all, they were small runners taken as they showed roots, dibbled into a bed

at 4 inches apart in sandy loam and leaf mould, and when tolerably well established were transferred singly to six-inch pots. Altogether our plants were neither so strong nor so well ripened in the end of autumn as usual, and yet we question if ever they did better, as scarcely a plant missed fruiting, which led us several times to think that we may be over-particular as regards the strength of plants. We have turned out many of these forced plants, and have more still to plant. We wish we could have done so earlier, but the ground was not at liberty—one of the disadvantages of a small garden, which can hardly ever have a day's rest in any part. We regret the not having more planted out, as several rows planted early are now blooming and setting well, and from them at least we shall obtain a good crop after the general crop is over.

We will just state how the ground was treated for the Strawberries referred to. It had carried a very heavy crop of Broccoli and Winter Greens and with abundance of side shoots until late in the season. The ground was thus much impoverished, we could not obtain manure, but for some time we had wheeled into heaps on the ground the short grass from the lawn, and it fermented rather strongly. As soon as the Greens were all cleared off, or rather pulled up and left a few days, they and a good layer of the hot grass were placed in the bottom of a trench as the ground was trenched over, and then a small dressing of rotten tree leaves was placed on the surface to be wrought in with the plants from pots, and to serve as a slight mulching, and we feel sure that we shall have fine gatherings from the plants next season, and a fair one in the following season. We have several times proved that the short grass thus fermented first is a valuable manure when placed far enough from the surface to become mild and sweet before the roots reach it. It also becomes a valuable component in a rubbish-heap when frequently covered over with earth, for then two objects are gained by one operation—the virtues of the grass are stored up in the heap, and the air is not polluted with its noxious exhalations when undergoing rapid decomposition.

The work as regards fruit trees has been much the same as in previous weeks. The weather has thrown us behind in the matter of foreshortening, and much trouble has been taken in keeping birds from Cherries, Raspberries, &c. Against our will we have thinned the sparrows reasonably, but nothing will entice the blackbirds; still the rain has given us relief, as now they can obtain soft food, without resorting so much to Strawberries and Cherries. They will also come long distances. The other day we watched a bird with seemingly a bunch of three Cherries in his bill, flying fully half a mile, and then he seemed on the wing, no doubt to his bower of love, where the young would be expecting his visit. The birds will obtain their share, even if netting is freely resorted to. All gardens with woods and shrubberies round them will have a fair allowance of these visitors if netting be not resorted to. We had a few beautiful pyramid Cherry trees, and before we could throw a net over them the blackbirds were carrying off the fruit wholesale, even before they were coloured. The men set up a gaudily dressed guy near the trees, with a bunch of flowers in his breast, and that stayed their ravages until we could net them. Anything striking, even long streamers of white paper, will keep them away until they become used to it, and, therefore, when such means are all that can be resorted to, the deterrent, whatever it is, should be frequently changed.

Watered the inside of vineries, Peach-house, and orchard-houses, with manure water from the farm dunghill, as it is yet pretty good, before all the manure is carried for Turnips, &c. We rather regretted that some of the trees in the Peach-house were thinner of fruit than usual, but we now wish we had thinned all the others as much, as the fruit on the thinnest trees have been magnificent. We must have another raid on the fruit in the orchard-houses before they are too far advanced. On one tree in the Peach-house the fruit would average from 12 to 15 inches apart, but the weight would be more than where they were 6 to 8 inches apart. All our trees in pots in the orchard-houses had a good mulching of decayed Mushroom-dung over the pots, and that has saved much watering. We would have preferred fresh horse-droppings thrown into a heap to heat for a few days; but then even this heating will not destroy the vitality of all the Oats in the droppings, and the growing of the Oats causes loss of time in pulling them up, whilst guarding against making labour, even in this little matter, is to be considered. We made up the deficiency in fertilising properties in the material used, by giving a pinch of superphosphate or of soot to each pot, to be carried

down with the waterings. As some correspondents wish to know the safest of artificial manures, we would recommend the superphosphate of lime in the shape of ground or dissolved bones, as in a 12-inch pot as much may be placed at a time as can be taken between the thumb and two fingers, and if double or treble of that amount is given little harm, or none rather, will ensue, and this cannot be said of guano and some other artificial manures.

ORNAMENTAL DEPARTMENT.

The rain came most seasonably to enable us to cut some grass and banks of grass a little long and rough, but which we were afraid to touch in the parching weather lest we should leave a brown track instead of a lovely green one behind us. The lawns, delightfully green, will now run little risk of burning and browning for the season.

We have commenced what will be rather a tedious affair—taking up *Plantains* from turf fresh laid last season. We obtained the turf from the sides of the highway, and nothing could have looked better last season, as what few *Plantains* showed themselves were taken out as the turf was laid. The advantage of roadside turf is, that the grass will be fine at once, and will also look well at once; but the disadvantage is that it is almost sure to be well supplied with the seeds of the larger *Plantain*, and which are sure to thrive amazingly when taken to new quarters. Nothing is more destructive of the beauty of a lawn. They will throw up their seed-stalks a few days after mowing, and render the use of the Daisy-knife almost constantly necessary. If let alone for a season or two they will almost occupy as much space as a small Cabbage, and they will so squat down in the soil as to look on the lawn like so many birds' nests below the general level. There is no way of thoroughly extirpating them except spudding them out. We have had them cut over a little below the surface, and ere long we had a mass of plants instead of one. We have done the same, and put a pinch of salt in the hole, but that is by no means effectual; for, though the salt injures the top of the root left, if it does not kill it, the root will send up shoots from a good way beneath the surface, and the labour must be repeated. A light spud with a handle, and a tread for the foot, and from three-quarters to an inch in width at the point, is a good tool for the purpose; and the more effectually the work is done the cheaper it will be, though it takes much time at first. We have taken up large plants with 12 or 15 inches of straight root, and the cutting or breaking of that root some 4 or 6 inches from the surface would be only a very temporary benefit, resulting in several strong heads the next season. Even with small plants, though some will only have 2 or 3 inches of root, yet many will have a straight juicy root from 4 to 8 inches long. The thorough efficacy of the work depends on the taking even the small point up unbroken. All other modes of taking up will only be temporary palliatives. Half an acre of smooth clean lawn, free from weeds, will yield more satisfaction than a dozen of acres crammed with *Plantains*, &c. Patience, perseverance, and activity must be brought into exercise, or the *Plantain* will gain the mastery.

Fresh-arranged plants, removing *Pelargoniums*, out of bloom, and filled with *Fuchsias*, &c. Potted *Pelargoniums*, *Gesneras*, *Caladiums*, Feathered *Cockscombs*, *Begonias*, &c., for future supply, and prepared positions for striking *Pinks*, *Carnations*, and double *Wallflowers*.—R. F.

COVENT GARDEN MARKET.—JULY 10.

THERE are very few alterations to quote in this market, the present favourable weather affording us ample supplies both homegrown and foreign. The latter comprise Melons, Peaches, Apricots, Nectarines, and several varieties of Plums. Potatoes are coming in sound and good at present.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	3	0	4	0	Melons..... each	3	0	5	0
Apricots doz	3	0	4	0	Nectarines doz.	6	0	10	0
Cherries lb.	0	6	1	0	Oranges 100	8	0	14	0
Chestnuts bnsh.	0	0	0	0	Peaches doz.	8	0	15	6
Currants ½ sieve	3	0	4	0	Pears (dessert) .. doz.	3	0	4	0
Black doz.	4	0	5	0	Pine Apples lb.	4	0	6	0
Figs doz.	3	0	6	0	Plums ½ sieve	0	0	0	0
Filberts lb.	0	0	0	0	Quinces doz.	0	0	0	0
Cebs lb.	0	9	1	0	Raspberries lb.	0	6	0	8
Gooseberries .. quart	0	4	0	6	Strawberries lb.	0	6	1	6
Grapes, Hothouse. lb.	2	6	0	0	Walnuts bush.	10	0	20	0
Lemons 100	8	0	12	0	Green.... per 100	1	6	2	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....	each	0	3	0	0	0	0	0	0
Asparagus.....	bundle	0	0	0	0	0	0	0	0
Beans, Kidney, per 100	1	0	2	0	0	0	0	0	0
Scarlet Run, ½ sieve	0	0	0	0	0	0	0	0	0
Beet, Red.....	doz.	2	0	3	0	0	0	0	0
Broccoli.....	hundle	2	0	3	0	0	0	0	0
Brs. Sprouts ½ sieve	0	0	0	0	0	0	0	0	0
Cabbage.....	doz.	1	0	1	6	0	0	0	0
Capicums.....	100	2	0	3	0	0	0	0	0
Carrots.....	bunch	0	6	0	8	0	0	0	0
Cauliflower.....	doz.	3	0	6	0	0	0	0	0
Celery.....	bundle	1	0	2	0	0	0	0	0
Cucumbers.....	each	0	6	1	0	0	0	0	0
pickling.....	doz.	0	0	0	0	0	0	0	0
Endive.....	doz.	2	0	0	0	0	0	0	0
Fennel.....	bunch	0	3	0	0	0	0	0	0
Garlic.....	lb.	0	8	1	0	0	0	0	0
Herbs.....	bunch	0	3	0	0	0	0	0	0
Horseradish.....	bundle	2	6	4	0	0	0	0	0
Leeks.....	bunch	0	3	0	0	0	0	0	0
Lettuce.....	per score	1	0	0	0	0	0	0	0
Mushrooms.....	pottle	2	0	3	0	0	0	0	0
Mustard Cress, punnet	0	2	0	0	0	0	0	0	0
Onions.....	per doz. bcbs.	5	0	0	0	0	0	0	0
Parsley.....	per sieve	3	0	4	0	0	0	0	0
Parsnips.....	doz.	0	9	1	0	0	0	0	0
Peas.....	per quart	0	6	1	0	0	0	0	0
Potatoes.....	bushel	4	0	6	0	0	0	0	0
Kidney.....	do.	6	0	10	0	0	0	0	0
New.....	lb.	0	2	0	0	0	0	0	0
Radishes doz. bunches	0	9	1	0	0	0	0	0	0
Rhubarb.....	bundle	0	4	0	0	0	0	0	0
Savoy.....	doz.	0	0	0	0	0	0	0	0
Sea-kale.....	basket	0	0	0	0	0	0	0	0
Shallots.....	lb.	0	8	0	0	0	0	0	0
Spinach.....	bushel	2	0	3	0	0	0	0	0
Tomatoes.....	per doz.	2	0	3	0	0	0	0	0
Turnips.....	bunch	0	6	0	0	0	0	0	0

TO CORRESPONDENTS.

*. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

MOTTO (S. S. S.).—You have represented the sentence as three words, whereas there are only two—"Considerate Lilla," or "Consider ye the Lilies."

JOURNAL OF HORTICULTURE PRIZE (D. T. F.).—You ask, "Will there be any limit to the quantity of fruit on each dish?" To which we can only reply, Not any; but we conclude that no exhibitor would either have more or less quantities than are usual on dessert dishes. Let it be remembered that good taste is required to accompany the gardening skill testified by the excellency of the fruits.

GRAPES AT MANCHESTER SHOW (T. Harwood).—We cannot say on what ground the Judges awarded the prizes to the Muscat Grapes at Manchester, as we were not present. What was the condition of the schedule? If it was that all fruit exhibited must be ripe and fit for table, then unripe fruit ought to be disqualified; but if there was no such condition, fruit not perfectly ripe was admissible. We certainly agree with you that it is impossible to judge Melons without cutting them.

GRAPES BECOME BROWN (H. H.).—They are severely rusted. The cause, probably, is their being syringed, and whilst wet exposed to a cold current of air.

CATALOGUE OF SUB-TROPICAL PLANTS (R. J.).—Though most of the principal nurserymen give lists of these, we do not know of any catalogue published in this country containing full descriptions of such plants.

TREES AND SHRUBS FOR COTSWOLD HILLS (B.).—We should think, as the substratum of these hills is oolitic, that Beech and Spanish Chestnut would be at home, likewise Birch, Mountain Ash, and all the Thors, as well as trees worked on that stock, such as Mespilus, &c.; but it would not be advisable to try Elms, Oaks, nor the taller kinds of Poplars. Many of the Conifers would do well in such a situation, and Yews and Junipers would be quite at home. The Scotch Fir and many kindred Pinuses would succeed as well as, and, perhaps, better than in a lower situation. Of shrubs, most of the Rhododendrons and the common kinds of Azaleas and Andromeda will do. Box may be planted plentifully; but we doubt if Laurustinus and Portugal Laurels can be depended on. Common Laurels, Double-flowered Furze, Cotoneaster, and some other plants may be tried with a tolerable certainty of success. We doubt much if Berberis will do so well, and Daphnes, Pernettyas, and Weigelas like a stiffer soil. The Evergreen Oaks will also, probably, thrive, but that Hollies will do so is doubtful, as they prefer a more sheltered position. Many deciduous shrubs, as Lilies, Deutzia scabra, Ribes, and Mock Orange will succeed well.

VERBENAS FOR EXHIBITION (Constant Reader).—These are very fine—Mrs. Turner, Lord Leigh, Annie, Black Prince, Géant des Batailles, Lilac King, Rose Imperial, Admiral of the Blue, Le Grand Boule de Neige, Madame Hermann Stenger, Foxhunter, and King of the Verbenas.

SELECT PANIES (J. Hall).—Alexander Tait, Cherub, Arab, Miss Muir, Miss Ramsay, John Inglis, Lady Lucy Dundas, J. B. Downie, George Wilson, Masterpiece, Yellow Queen, and Alice Downie.

KALMIA LATIFOLIA (J. G.).—We do not remember the article to which you refer. There is a variety of Kalmia latifolia called major splendens, having large deep rosy flowers; also myrtifolia, with smaller and darker flowers than K. latifolia.

FUMIGATING A VINERY (Tobacco, H.).—There is no danger of injury from the fumigation of a vinery with tobacco when the Grapes are changing colour. Use shag tobacco or tobacco paper. No amount of tobacco smoke will destroy bug.

LEAVES (Mary King).—It is impossible to name a plant from a few dead leaves. They are of the same shape and fragrance as those of the Willow-leaved variety of the Bay tree, *Laurus nobilis*, var. *salicifolia*.

NIGHT-SCENTED STOCK MANAGEMENT (A. S. W.).—We think the plant has been potted in too rich soil, and has been soaked with water, which circumstances would be sufficient to account for the bad condition of the roots; the loss of foliage may be the result of keeping the plant in a close atmosphere. You could not have done better than have repotted the plant in light sandy soil, affording good drainage, and have kept it moderately dry in a cold frame with abundance of air, and more liberal supplies of water when the roots were working freely in the fresh soil. You may now put in cuttings of any of the young shoots, inserting two joints in the soil. The surface should be covered with an inch of silver sand. The pots may be set in a frame, which should be kept close and shaded from sun, the cuttings being occasionally bedewed overhead with water through a fine rose, and the sand kept moist but not very wet. The cuttings will root slowly but surely; or they may be placed in a hotbed, and when well rooted should be potted off singly in small pots in a compost of equal parts of light turfy loam, leaf mould, and sand, affording good drainage. After potted place them in a cold frame, keep close and shaded for a few days until established, and afford a sprinkling of water overhead every morning. When the plants recover from the potting air should be freely given—in fact, they should be fully exposed except during very wet weather, when the lights may be tilted. When the pots are full of roots shift into pots a size larger, and early in October remove them to a shelf in a cool airy greenhouse. The essentials to success are a free circulation of air, a light open soil, and good drainage, with careful watering in winter.

CHRISTMAS ROSE PROPAGATION (Idem).—You may take up the plants now and divide them into as many pieces as you find crowns, preserving as much root as possible to each. The divisions are to be planted where they are to remain, or in a border 1 foot apart, giving a good watering. A compost of two-thirds turfy loam and one-third leaf mould will grow it well, affording a mulching of about 1 inch of leaf mould over the crowns early in winter.

STRAWBERRIES—ESTIMATE OF SORTS (G. B., Bath).—Sir J. Paxton is a good cropper, handsome, and suitable for market purposes, also good for forcing. President is said to be a good cropper, but it did not bear heavily with me. It is better flavoured than Sir J. Paxton. Mrs. Nicholson sent me Comte de Zans, but as it was sent by post it died. It is said to be a good market sort. Dr. Hogg is a very hardy, healthy sort, like British Queen in appearance and flavour. I specially recommend Cockcomb and Wonderful as late market sorts. They are very hardy, great and sure bearers, stand travelling well, and are of the British Queen flavour. The crops of Rivers's Eliza, Cockcomb, and Wonderful are very fine here.—W. F. RADCLIFFE, Okeford Fitzpaine.

VARIETED PELARGONIUMS (W. H. M.).—We stated a fortnight since our opinions upon the subject. You will see some further remarks to-day in our columns. According to the decision of the Floral Committee of the Royal Horticultural Society, they would consider Annis Williams a Variegated Pelargonium, and Mrs. Milford not. We are of opinion that the Coffee tree does not come within the meaning of "a fruit tree," any more than does the Oak.

VINES ON OPEN WALLS (W. Spencer).—If you enclose five postage stamps with your address, and order "Fruit Gardening for the Many," it will be sent free by post. It contains what you need.

GRASS ON HEAVY SOIL (E. F.).—The best treatment you can adopt for your lawn is to have it well and deeply drained. The proposed dressing with small pieces of chalk may do good, but we fear the chalk would give a stony appearance to the surface. A dressing of compost formed of any waste vegetable matter, as tufts of grass, &c., turned over frequently and mixed with a load of lime to every four of compost, would form an excellent dressing for your lawn at the end of twelve months. Apply it in February. Draining the soil is what we recommend, and then top-dressing. A top-dressing of sifted cinders would tend to keep the surface from becoming spongy.

PEACH TREES ON WOODEN FENCE (Idem).—Your trees will seldom, if ever, thoroughly ripen their fruit, and they suffer from mildew on account of the wood being immature. They should be planted against a wall with a south aspect. To free your trees of mildew we recommend your washing them forcibly every evening with water during the prevalence of dry weather, and once a week with a solution of soft soap at the rate of 2 ozs. to the gallon of water. If this do not free them of mildew, dust the parts affected whilst wet with flowers of sulphur.

RHYNCHOSPHERUM JASMINOIDES AFTER FLOWERING (H. E.).—This is the plant of which you enclose a spray, and having been neglected it should have any old long bare shoots removed, preserving as much of the young wood as possible, and especially the shoots near the base. The plant may be potted, if requisite, in a compost of equal parts of turfy peat and loam, with a free admixture of silver sand. The drainage should be good. The plant should be kept moist, close, and shaded for a few days until it recovers from the potting, and should then have a light and moderately airy situation, a sprinkling of water morning and evening, and every encouragement to secure growth. Water copiously, but only when necessary. Regulate the shoots when necessary.

INSECT ON PEAR-TREE LEAVES (A. M. R.).—The destroyer of the leaves is called the Shiny Crab, it is the larva of the *Selandria Ebiops*, or Pear Saw-fly. They can be destroyed by dusting them with slaked quicklime.

FORCING VINES (Subscriber, Norwich).—You may plant inside as you propose, and you may force the Vines successfully that are planted outside; but you would do better to have them in June the first year, and in May the succeeding one. However, in either case we would advise you to proceed thus:—Give heat in your pipes to hasten on the crop just thinned, and have it off as soon in the autumn as you can, so as to give the Vines a rest before you begin to force them. By the 1st of October at latest, cover the border outside with 15 inches of litter to keep the heat in, and if you can protect from cold rains so much the better; shut up your house and commence very gradually with 45° in December, raising the heat by degrees.

PINE-APPLE LEAVES BROWN (A Reader).—Try what a little shade will do for your Pines. We suspect they are not quite right at the roots, and too much sun with too little air has scorched the tops. Examine the roots, and if not doing well shake away the soil, drain well, and repot in fresh, rough, sandy loam. If the roots are progressing healthily let them alone. Shade, and give plenty of moisture, with air, however little, at the top the first thing in the morning.

EXHIBITION STANDS FOR ROSES, DAHLIAS, AND PANSIES (J. F. S.).—A stand for, say, twenty-four blooms of Dahlias should be 48 inches in length by 18 inches in width from front to back. It should be raised at the back 7 inches, and 3½ inches in front. The holes should form three lines of eight each, and should be 6 inches from centre to centre, and 3 inches from the outside. The metal tube for the water may be 1 inch in diameter, and should fit into the holes of the board; the wooden tube to receive the bloom, and fitting into the metal tube, should rise 1½ inch above the board. The colour of the board should be a lively bright green. The dimensions of a stand for twelve blooms of Dahlias can be easily deduced from the foregoing. Such a box as that just described would be suitable for Roses if shown in single trusses; for single blooms of Roses the dimensions would be almost too large, while for bunches of three trusses it would scarcely afford sufficient space. For Roses the tubes may be fastened to the bottom of the box, not using a board as in the case of Dahlias, and the spaces filled up with fresh green moss. The most suitable colour for a box for Roses is dark green. A stand for Pansies should have the outside appearance of a neat box, painted dark rosewood and highly varnished; the lid attached by hook-and-eye hinges, and locked. The lid removed shows a stand of four rows of Pansy blooms, six in each, arranged on a zinc plate one-eighth of an inch thick, painted green, with a slight yellow tinge, and varnished. Length of box 1 foot 6 inches, 12½ inches wide, and 3 inches deep, three-eighths of an inch thick, and with a little beading inside, on which the plate rests, so as to lie flush with its edges all round. The tubes are soldered to the under part of the plate flush with the back of the holes to receive the stalk, but receding to the front to allow the flower to lie well. These holes are three-fourths of an inch long and half an inch wide. The tubes beneath are 2 inches deep, 1 inch long, and five-eighths wide. The front holes are 1½ inch from the edge of the plate, and 1½ inch from the side, and the rows are 2 inches above each other. When placing the stand for exhibition it can be arranged sloping to any angle, by placing something underneath it at the back.

HEATING A SMALL CONSERVATORY (A Subscriber, Guildford).—You can heat your small house successfully with a flat-headed iron stove, with a pan of water over it. You can heat it more easily still by gas, the burner enclosed in a small iron stove, and a pipe from 2½ to 3 inches wide going through the house from the stove, and thence into a chimney or into the open air, and moist heat will be secured by a pan of water over the stove. It is a mistake to suppose that heating by hot water is more moist than other modes of heating, unless vapour escapes from the water. However, you can place a small boiler of tin or galvanised iron over the jets of gas,

but have a pipe through the boiler to let the fumes of the gas escape. As we cannot make the matter more simple without repeating what has already appeared, we would advise you to order No. 269, New Series, stamped 4d., from our office, where different plans of heating by gas are given, one of which no doubt would suit you.

PLANT-HOUSE (Amateur, Witten Lodge).—We do the best for correspondents, but we cannot undertake to keep their cases in mind, for we have scores weekly. Taking your letter on its present contents, we would say that there are few who would find the difficulty of having so many Grapes, and we fear it will be found to be a mistake, if it is considered that a plant-house will take up much less labour and attention than a vinery. We believe it will take more. However, we quite coincide with your idea of having a house entirely for plants, and we should approve of that being next the house. It might be as well to do only the first half of your vinery next the house the first year, and the second 21 feet if you liked in the second year. We also approve of your proposed arrangements, to give room. We would have climbers against the back wall, and a platform against it 21 inches wide, the same in front, a pathway all round 2½ feet wide, and a sparred table in the centre 5 feet wide. If the pathway were not wide enough, you might make it 3 feet, and take the 1 foot from the central platform, or a little from each. The platform should be 2 feet 9 inches or 3 feet from the ground. The plants most suitable for winter flowering in such a house, are Camellias, Epacris, Acacias, Winter Heaths, Chinese Primroses, Cinerarias, &c.

DIRECTION (N. Impey).—M. François Lacharme, Aux Rivieres, Lyons (Rhône).

FERN IN GLASS CASE (Yorks).—Your treatment is totally wrong. Keep the case shaded, only partially opened, and apply water twice a week during hot weather, but do not pour it over the fronds. The Ferns require a moist atmosphere.

MUSCAT GRAPES DISEASED (G. Fenn).—They are severely affected with the ulcer called "the spot." The roots, probably, are not sufficiently active. More warmth to them, and some warm, weak, liquid manure, with more air admitted, would check the progress of the disease. Pick off the spotted berries as soon as detected.

NAMES OF PLANTS (James).—1, Sedum acre; 2, Erica depressa; 3, Hoya bella; 4, Erica hirta; 5, Dielytra spectabilis. (E. S. B. G.).—Solidago virga-aurea; Phytolacca orbiculata. (F. Thompson).—2, Allium scorodoprasum; 3, Saxifraga sp.; 4, Viola canina; 5, Armoracia vulgaris; 6, Ornithogalum umbellatum. (A. B.).—Dictamnus albus. (S. T.).—1, Pinguicula vulgaris; 2, Draba verna; 3, Orobanchus tuberosus.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending July 9th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 3	29.968	29.787	74	55	64	61	S.	.14	Overcast and mild throughout; rain at night.
Thurs. . 4	29.856	29.848	72	52	64	61	S.	.02	Rain; cloudy with showers; overcast.
Fri. . . 5	30.072	29.979	71	41	64	61	S.W.	.00	Fine with white clouds; very fine; fine at night.
Sat. . . 6	30.133	30.131	74	42	64	61	N.W.	.00	Fine; very fine; fine at night.
Sun. . . 7	30.232	30.224	76	42	64	61	N.	.00	Very fine throughout.
Mon. . . 8	30.245	30.224	77	42	64	61	N.E.	.00	Slight dry haze; very fine throughout.
Tues. . 9	30.305	30.158	77	44	64	61	N.E.	.00	Very fine throughout.
Mean	30.115	30.050	74.43	45.43	64.00	61.00	..	0.16	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

GAME FOWL BREEDING THIS SEASON.

"YORKSHIRE" only seems to be sharing the same fate in the chicken department as many of his brother fanciers this season; but as his case seems to be entirely like my own, I venture to say a few words about my own yards, which, I am sorry to think, will do but little more than corroborate "YORKSHIRE'S" statements; but if experience will bring about a cure for the malady which is causing such mortality this season, I shall give mine and the result of my practice most willingly.

In the first place, I may state that I breed several kinds of fowls besides Game—viz., Brahmas, Cochins, &c., yet only the Game suffer. My Brahmas and Cochins are as strong and as healthy as in years gone by, and all my chickens, with but one brood excepted, have been brought up on the same gravel and grass run, and a large one too. My Game chickens have suffered precisely in the same way as "YORKSHIRE'S;" they go on all right until about a fortnight old, and then comes the "tug of war"—loss of appetite, violent purgings, then death; all these in one or two days. I have tried many things to save them, but have never saved one after the attack has fairly commenced. What I have found to be most beneficial are tonics, a little rue and cayenne made into pills, a little citrate of iron in their water, with a lump of camphor floating in it. (I fancy that bread soaked in ale will give diarrhoea unless administered very judiciously). If these precautions are neglected in a few days I find my chickens' wings down again and all going wrong.

As "YORKSHIRE" says, the disease is also novel to me, for I have reared hundreds of birds and, save in a small brood of Polands, I never saw the like before. I know there are general complaints this season, but how is it that some yards are entirely free from any such disease? If these who are fortunate would give us their experience, and at the same time also state the kind of place upon which the birds have been reared, I think this might ventilate the subject a little. As I have previously said, I have a large run, the grass I keep as short as it is possible for horses to graze it on purpose for my chicks, and yet I believe this is the place where my birds become diseased. The long wet season, no matter how short the grass is, must have a bad effect on birds which must be dry. But here another question suggests itself, Have the breeders in dry places without grass experienced the same bad results? If so, then my theory is undone; but from inquiries in my immediate neighbourhood, I find the reverse to be the case. I will give an instance. My chickens went on so badly that I resolved to place a brood in the kitchen garden away from the grass, and here they are doing (I am speaking of Game), as well as chickens possibly can do. They have no medicine because they require none; receive no unusual care, and are fed simply, chiefly on dry food—wheat, groats, and the like, the rest of their food consisting of what they get from the newly-dug earth, which is considerable, and insects from the adjoining small fruit trees.

One important part of "YORKSHIRE'S" letter I must now refer to—namely, that upon the removal of birds to different places. My chicks in the garden which have done so well are from Nantwich, in Cheshire, yet the gentleman who sent the eggs, Mr. William Church, lamentably complains of the

great mortality among his chickens. The same gentleman also speaks of my chickens doing well in Cheshire. I can easily imagine the improvement which would (I think naturally), take place in breeding on a limestone earth, and more especially with birds that have been bred in-and-in, and not in the neighbourhood of such material. I have noticed that the most healthy Game chickens that I have seen this season are those which have had the run of a garden, or on any soil away from grass. I have several friends near me who have not had a single loss from disease whose birds have been thus raised, and those who have had them on grass runs I find have invariably failed.—NOTTINGHAMSHIRE.

A GOOD AND CHEAP HEN-HOUSE.

THE house is 10 feet wide and 12 feet long; a passage-way, 4 feet wide, passes along the south side, in which are windows; this is formed by a partition, 3 feet high (see *fig. 1*), which extends from near the door to the rear, and supports the lower side of a sloping floor, which rises to the eaves on the north side. Above this sloping floor the roosts are fixed, and the droppings of the birds fall upon the floor, which being sprinkled with plaster they roll down, or are easily scraped off. There is a ledge at the front edge, which prevents their going to the floor. Under this sloping floor the space is divided by a partition, making a nest-room about 6 feet square, and a sitting-room 6 feet by 5, which is also used for a store-room for grain, eggs, &c. This sitting-room is entered by another door, and lighted by a pane in the gable end. The nest-boxes shove through the partition into the sitting-room, but there is no access for the fowls except when sitting. At these times hens

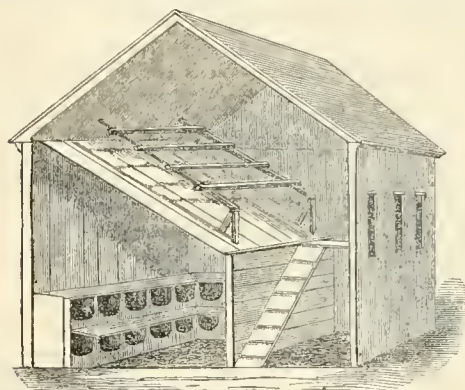


Fig. 1.

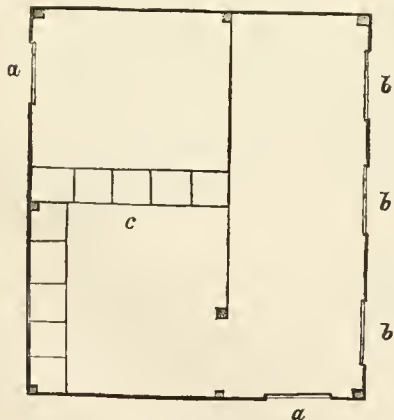


Fig. 2.

a, a, doors. b, b, windows. c, nest-boxes.

are moved, if they happen to be in boxes against the side building, and made to occupy those in the partition. The back end of the four-feet passage-way (see plan, *fig. 2*), is used as a feeding floor, and here stands the water fountain.

We made once a small hen-house, and lighted it by placing some of the roof boards, which went up and down, 10 inches apart, and fastening 8 by 10 glass between them, slipping the glass into the grooves in the boards, which were common flooring. The panes lapped about half an inch, were fastened by tacks, and little water came through. Windows in a fowl-house must be protected by slats or by wire. The use of plaster on the sloping floor under the roosts is very well—nothing can be better; but fine, dry road dust, swept up on a hot day, is as good.—(*American Agriculturist*.)

DROPSICAL TUMOURS IN A SPANISH HEN.

I HAVE just lost a valuable hen with, to me, a somewhat uncommon and singular disease of the ovaries. I am not quite certain "dropsical tumour" is the right term; it certainly is very applicable, and nearer the mark than anything else I can think of. I shall be extremely obliged for information from any person who has met with a similar case, with the mode of treatment if a cure has been effected, and as to whether Spanish fowls are more particularly subject to it than other kinds.

About a month ago I noticed that one of my young hens increased considerably in bulk from day to day. As she was just recovering feather after a protracted moult, I thought it might be occasioned by derangement of the system or a stoppage; so I gave her a teaspoonful of castor oil, penned her in a warm coop, and fed her on good soft food for a couple of days, but finding she increased in size rather than diminished, I thought it time to examine thoroughly. I found the whole of the abdomen without feathers, the skin very dry, hot, and feverish, and on the point of cracking in several places from over-tension. A large lump which appeared to be considerably larger than an egg could be felt just below the vent, the remainder of the bird seemed to be in perfect health—the new feathers on the back and wings well laid and glossy, eye bright and sparkling, comb a bright red, and the general appearance of the head that of a fowl in full laying condition. For three or four weeks her appetite had increased, and she now ate as much as any three fowls.

After consulting with a friend we decided to open the abdomen and extract whatever we might find. Applying a sponge with chloroform to the nostril, she soon ceased struggling, laid her head quietly on the table, and went off into a sound little nap. With a sharp penknife an incision of about 2 inches long was made just above the vent, the bird being on her back, simply dividing the skin; upon inserting the finger a globular body could be felt, about the size and shape of an egg, but yielding to the pressure of the finger. Piercing it with the point of the knife a quantity of yellowish fluid ran out; this being emptied, a second one presented itself and was served in the same way, and two more could be distinctly felt, but as the bird was beginning to move we decided not to do any more for the time, but, sewing up the hole, she was replaced in the coop, perfectly recovered herself in a few minutes, and began to eat as usual, seemingly none the worse for the operation.

These tumours were the full size of an egg, contained nothing but a yellowish water, coming away freely when empty, round like an India-rubber ball, and like it regaining their shape after pressure.

I fed the bird well for another week, but finding that she increased in bulk rather than diminished, her hinder part dragging as she walked or waddled, I thought killing would be the most merciful action, and then dissecting to find the cause of the disease. With an extra strong dose of chloroform, held to the nostril until she ceased to breathe, this was quietly done in a minute, and, when quite cold she was laid open from the beginning of the breast-bone to the rump. I took out five tumours the size of a Duck's egg, and then found scarcely anything left; everything seemed to have diminished in quantity as these water-eggs increased, no disease was apparent save this of the ovaries, the flesh evidently wasting away in spite of the enormous appetite the bird had had. The five water-eggs would have about filled a quart mug. The question is, Would these eggs have passed as ordinary eggs, or would they have burst inside? If not the fowl herself must have burst, as she was very nearly doing when killed.

Operations of this and any kind are always better and more easily performed when the sufferer is under the influence of chloroform, or some other stupefying vapour, otherwise it becomes an act of unnecessary cruelty.

I would just remark, in conclusion, that the hen was hatched

March twelvemonth, had laid well before Christmas, and had never before ailed; the change had been since the last moult.
—A. LE CHEMINANT, Foulon Vale, Guernsey.

JUDGING GAME FOWLS BY SHAPE.

THE PROPER SHAPE OF THE GAME COCK.

Beak, strong, curved, long, and sharp, stout at the base (a good boxing beak as technically termed).

Comb neatly and closely dubbed, red in the red-combed sorts; darkish red in dark-combed sorts. Cock chickens and young stags should be exhibited undubbed to show the proper shape of the comb, which should be single, not too large or clumsy, rather thin, serrated, or lobed, erect and straight, and rather low in front.

Face, same colour as comb. Gills, wattles, and deaf ears same colour as comb, and neatly trimmed.

Head, long and sharp. Eyes, bright and clear. Face and throat hard, lean, and thin.

Neck, long, arched, and strong, with a firm, hard, short, strong, and rather broad-feathered hackle or mane, close, neat, and very hard feathered; the feather points to shoulders and no longer.

Back, short and very hard, broad at shoulders and narrow at tail.

Sides of the body well rounded.

Breast, broad and very hard, and neither too round nor too full, as a heavy breast is useless weight, nor yet too lean, but still not sharp-breasted, a hard breast being most essential, as the most vulnerable part of the body.

Stern, or rump, narrow, short, and neat, feathers short and hard.

Wings, very strong and well rounded, and neither too short nor too long; short-winged birds being too heavy in body generally, and often broad-rumped, and too long-winged birds frequently long in body and in feather. Wings carried closely pressed to the sides, and neither too high nor too low, but protecting the fleshy part of the thigh.

Tail, neither too long nor too short, long-tailed birds being generally long in body and in feather, and too short tailed often too clumsy in body and broad in rump. The tail should be carried "well up" for spirit, and should be open or fanned and spreading, with a full crescent-like curve of the sickle feathers, and well sickled, the sickle feathers carried just clearly above the points of the straight feathers. Cock-fighters prefer rather short, neat-tailed birds, with tails carried well up, and not too large, but open. Long-spreading, well-sickled tails, carried well up are the most showy tails. Squirrel tails very bad of course. Some judges and fanciers prefer the rather drooping, close-switch, or whip-tailed birds, saying these are finer-feathered, neater, and higher-bred birds. I consider the drooping, closed, or folded and long-tailed birds to be narrower in body, less strong, and less spirited than such as I have described. These tails are not much sickled. There should never be much fluff or down at the root of a cock's tail, as this shows softness, and the base of the tail should be narrow.

Thighs, short, hard, and very muscular, and placed well, wide apart, and well up to the shoulders, under the broadest part of the body to make the bird stand firmly on his legs, and to give "a good forehead" and a more commanding appearance.

Legs, neither too long nor too short; strong, but never in the least clumsy, rather slender than at all clumsy (as the muscular power lies in the thigh), placed well and widely apart to make the bird stand firmly and carry plenty of spur. Spurs placed low down, long, and not too stout or clumsy, sharp, and not turning in too much, and rather curved upwards. Scales of legs close and smooth.

Feet, spreading claws, long and straight. Talons long, strong, and narrow. Back claw placed low and flat to the ground, and very long and strong, to make the bird stand firm and give him a good spring. Never in the least Duck-footed. Broad, short, flat nails are very bad, and show the Malay cross in the breed having them.

Plumage, all very hard, scant rather than thick of feathers, short, close, and firm, the feathers and quills very strong everywhere.

Body in hand, short and very hard in flesh, and very muscular in every part. Belly small and tight in the pinions. Legs of cock rather longer than those of the hen in proportion.

Carriage, upright, active, quick, fierce, sharp, and fiery. Curved-backed cocks, if with a straight curve and not humped

or lop-sided, are "shorter in body and fiercer" than straight-backed cocks are.

Weight, for exhibition, from 4½ lbs. to 5½ lbs.; for the pit, 4½ lbs., as the most active weight. Game cocks should never be heavy or clumsy in body, but should be light-fleshed, with sufficient bone for strength, but not too heavy in bone or flesh for activity, and should combine great strength with great activity in proportion to their size.

Game cocks should be one-third larger than their hens. Game cocks are in their prime at two years old, and decline after four years, as do the hens in general, though some old birds are as good.—NEWMARKET.

P.S.—I have to thank "YORKSHIRE" for his replies to my three questions.

HOUDANS—RIVAL INCUBATORS.

ABOUT twelve months ago, owing to the opinion you expressed as to the merits of the Houdan fowl, I determined to keep no other. I selected five pullets from the stock of a noted breeder, and obtained a cockerel from a distant part of the country, in order to run no risk of in-and-in breeding.

My object being to rear chickens, of course I had to keep a few sitters, and I purchased ten Dorking pullets, thus having fifteen females to one male bird. This, probably, you will consider too many, but the result has proved otherwise.

My Houdan pullets, which were not hatched until August, commenced laying at the new year, and they continued to do so up to the present time. Their eggs are considerably larger than those I obtain from the Dorkings, and, on an average, they miss laying one day in five. You will agree with me, therefore, that I have every reason to be satisfied: indeed, I am convinced that, for general purposes,—as egg-producers and table birds—Houdans surpass any other breed.

Several of my friends complain of their ill-success this year with chickens. In February I placed nine eggs under one of my broody Dorkings, and she hatched seven chickens. Of the remaining two, one was broken, and in the other I found a dead chicken. I kept the hen and chicks in a storeroom at the top of my house, and fed them liberally with chopped egg, bread, and grits. The room had a boarded floor, which, during my absence from home one cold day in March, was thoroughly scrubbed and cleaned by my maid. The next morning six of the chickens were unable to walk, their feet being quite paralysed, and during the day all died. The hen had, therefore, only one chicken, which appeared as strong as ever, and is now a fine bird.

I next sat a hen on thirteen eggs: she produced twelve chickens, which are all living. I never saw birds grow so rapidly, and this is the opinion of every one who has seen them. My next clutch was nine from twelve eggs; the fourth, seven from twelve, four being broken in the nest; and my last brood consisted of eleven chickens, three of which have died. One was trodden to death by the hen, one died from natural causes, and the third was worried by a neighbour's dog.

I have, therefore, reared thirty-seven chickens from fifty-seven eggs, which I consider very satisfactory. I have given away and sold several sittings, and in all cases the success has been equal to my own.

In your Journal of May 27th, a letter appeared from "Brown Red," on "Rival Incubators." With your correspondent I agree that it is a great inconvenience to fanciers of a non-sitting variety, to keep sitting hens, which are useless for the greater part of the year, but although anxious to obtain an incubator, I am at a loss to decide which to select. It would be a great favour to poultry-breeders generally if the manufacturers of different incubators would each place one of their manufacture in the care of some breeder, in order that their merits may be thoroughly tested. If no other could be found, I should have no objection to undertake the responsibility, and to give you the result. I enclose my name and address, not for publication, but as a guarantee of good faith.—LONDON.

PETERBOROUGH POULTRY SHOW.

THERE is no question that with a suitable revision of the prize schedule this Show might be greatly increased, but the classifications as they now stand are scarcely calculated to be popular. The largest amount of prizes is at present given at Peterborough to "Mixed Breeds, any age or colour." This, of course, induces the entry of a number of mongrel-bred birds of little real market value, and not by any means an interesting portion of the Show to visitors generally. It

would be well if this class were headed "For the best Breed not yet named, or Cross-breed for Farm Purposes." It would then form an interesting class, which would, no doubt, be well filled.

In Grey *Dorkings*, many were birds of great merit, but scarcely a single pen could be named in which one or other of the three birds was not in deep moult. The same remark applies with equal force to the Game class, in which several hens were such "Tartars" to each other that they had either to be tied by the leg to the wirework of the pen, or one of them had to be removed into the travelling basket. This in any case when it occurs frequently, is a great drawback to an exhibition, and it is from this cause that a cock and only one hen are so generally shown together. Some very excellent Game cocks were thoughtlessly and absolutely spoiled for exhibition, by having the entire head purposely denuded of feathers, a plan that in Yorkshire many years back was somewhat customary for cocks entered for the pit, but is quite out of place in competition. *Cochins* proved so inferior, that a second prize could not be awarded. The *Hamburgh* classes were the worst represented in the whole Show; but the Black Red Game *Bantams*, and some Black-footed *Bantams*, placed this latter class among the foremost public favourites. Turner's pens of Sheffield were engaged for the poultry.

The *Turkeys* were really good, but the *Geese* were badly matched for exhibition, in more than one case Grey and White being shown together.

Some very well-bred Aylesbury *Ducks* were shown, and there were also good Rouens and Muscovy *Ducks*.

A pen of three Australian Black *Swans* in capital feather, and two pens of the common White *Swans* in equally good plumage, proved an excellent contrast, and caused much attraction.

Master H. B. Little exhibited a pair of very good Himalayan *Rabbits*, a variety which seemed to be nearly unknown in this district.

An important feature of the Show was the *Pigeon* class, each competitor exhibiting three pens together, but of different varieties, for the Society's prizes. Many of these *Pigeons* were of unusually good quality.

The tent was an extensive one, and had bad weather set in would have afforded ample protection, but fortunately the day was very fine, and, consequently, the attendance of visitors was great. With a little extra pressure by the Committee, there cannot be a doubt that year by year the poultry department of the Peterborough Show will make an advance and prove proportionately remunerative.

DORKINGS.—First, R. Wood. Second, J. Longland. Highly Commended, J. W. Harrison. Commended, J. Carter; T. Parker. **CHICKENS.**—First, R. Wood. Second, T. Amies. **COCK** (Any colour).—First and Second, R. Wood.

GAME (Any colour).—First, J. W. Harrison. Second, S. Deacon. **COCK.**—First and Second, J. Laming.

COCHIN-CHINA (Any colour).—Prize, J. Longland.

HAMBURGH (Pencilled).—Prize, J. Johnson.

HAMBURGH (Spangled).—First, J. F. Liversidge. Second, J. Freeman.

BANTAMS (Any variety).—First and Second, Mrs. C. B. Edwards (Black Red Game, and Bantam Chickens). Third, W. Stokes (Black-footed Bantams). Commended, S. Deacon (Bantams).

MIXED BREED (Any colour).—First, J. W. Harrison (Dark Brahmas). Second, J. H. Everett (Dark Brahmas). Third, J. Freeman (Cochins and Dorkings). Fourth, J. Whitstead (Dorking and Cochins). Highly Commended, Lady G. Gordon (Speckled-footed Bantams).

TURKEYS (Any colour).—First, J. Craig. Second, T. Parker.

GESE (Any colour).—First, S. Deacon. Second, J. A. W. Underwood. **DUCKS.**—Second, J. W. Harrison (Rouen). Third, J. Whitstead (Muscovy). Commended, J. W. Harrison (Aylesbury).

PIGEONS.—First, J. W. Harrison (Dun Carriers, Black Carriers, Black Fans). Second, R. Payling (Black Carriers, White Ponters, Almond Tumblers). Third, A. Storrar (Black Carriers, Black Mottled Tumblers, Black Barbs). Highly Commended, R. Payling (Kites, White Ponters, Yellow Turbits).

EXTRA.—Highly Commended, Miss Little (Two Swans); Master H. B. Little (Pair Himalaya Rabbits); — Wagstaff (Black Swans from Sydney, Australia). Commended, J. Elgar (Pair Houdans).

Edward Hewitt, Esq., of Eden Cottage, Sparkbrook, was the Judge.

TOWCESTER POULTRY SHOW.

THE annual meeting of the Northamptonshire Agricultural Society took place on the 3rd and 4th inst., at Towcester. The Show was not only very good, but this year a most commendable test was provided in case the weather should prove unfavourable, but fortunately it was propitious.

Several of the prize *Dorkings* were of great merit, and were sent in first-rate condition, though numbers of the remaining pens were fast falling into deep moult. The same remark applies with even still greater force to the *Spanish* classes. The single cock *Spanish* class proved so indifferent, that both prizes were withheld. The *Game* classes were among the best in the show, there being plenty of excellent birds combined with a large entry. In *Cochins*, the Partridge cap birds far outstripped their competitors. In the *Cochin-China* Chicken class, we regretted much to find that with a full entry almost every pen contained one or more birds with the "twisted wings," so fatal an objection in this variety. Of *Hamburghs*, all four kinds were classed together, and, strange to say, every pen proved to be Golden-spangled, many of them being very good. Some excellent White *Bantams* were shown, and some very tolerable *Game Bantams*, but the latter chiefly in deep moult. A rather nice pen of *Friesland Bantams* was exhibited in the Variety class, and also some good Dark *Brahmas*.

In *Geese* and *Ducks*, Mr. Fowler, of Aylesbury, with capital pens easily withstood all opposition.

In *Pigeons* each exhibitor by the Society's rules shows in lots of three pens, as a sweepstakes, added to which are first and second prizes from the general funds. The competition was excellent, and the two winning lots such as are rarely met with.

DORKINGS (Any colour).—First, T. Tatham, Kingsthorpe. Second, H. Lingwood, Barking, Needham Market, Suffolk. Third, R. Wood, Clapton, Thrapstone. **HENS.**—First and Silver Cup, T. Tatham. Second, H. Lingwood. **CHICKENS.**—First, J. Longland, Grendon. Second, J. K. Fowler, Aylesbury. Third, H. Lingwood. Commended, S. Taylor. **PULLETS.**—First, R. Wood. Second, S. Taylor, Towcester.

SPANISH.—First and piece of Plate, J. Stephens, Walsall. Second and Third, Messrs. Birch & Boulter, Sheffield. Commended, W. R. Bull, Newport Pagnell, Bucks. **CHICKENS.**—First and Second, Messrs. Birch & Boulter.

GAME.—First, Second, and piece of Plate, H. Shield, Northampton. Third, J. Lane, Birmingham. Highly Commended, H. Shield. Commended, J. Lane; J. M. Payne. **HENS.**—First, J. Lane. Second, J. N. Beasley, Brampton. Third, J. M. Payne, Gayton, Northampton. Highly Commended, W. Barford, Aylesbury; S. Deacon, Oundle; J. Lane. Commended, J. Sargeant, Preston Deanery.

COCHIN-CHINAS.—First and piece of Plate, J. Stephens. Second, W. A. Taylor, Manchester. Third, J. N. Beasley. Highly Commended, J. K. Fowler; H. Lingwood. Commended, W. F. Checkley Moulton, Northampton. **CHICKENS.**—First, H. Lingwood. Second, J. K. Fowler.

HAMBURGH (Any variety).—First, W. A. Taylor (Silver-spangled). Second, W. Barford, Aylesbury. Commended, Messrs. Birch & Boulter (Golden-spangled).

BANTAMS (Any colour).—First, The Ladies Wentworth Fitzwilliam, Harrowden House. Second, W. A. Taylor. Highly Commended, J. H. Smith, Horton, Northampton. Commended, Mrs. F. S. Arkwright, Derby; J. D. Eblese, Northampton; G. J. Hitchcock, Hinton House.

ANY OTHER DISTINCT BREED.—First, J. K. Fowler (Brahmas). Second, J. Beasley (Japanese). Third, J. Smith, Horton.

GESE (Any colour).—First and Second, J. K. Fowler. Highly Commended, Hon. & Rev. A. G. Douglas, Sealdwell; The Ladies Wentworth Fitzwilliam.

DUCKS (Aylesbury).—First and Second, J. K. Fowler.

DUCKS (Rouen).—First and Second, J. K. Fowler.

DUCKS (Any variety).—First, G. Osborn, Pattishall. Second, J. Beasley (Buenos Ayrean).

TURKEYS (Any colour).—First, J. Beasley. Second, The Ladies Fitzwilliam. Highly Commended, S. Inns, Towcester.

SELLING CLASS.—First, J. Stephens (Spanish). Second, W. A. Taylor (Cochin-China). Third, J. Longland (Dorkings); Commended, J. Lane, Birmingham (Game); C. Wright, Northampton (Game).

SINGLE COCKS.

DORKING COCK.—First, J. Longland. Second, R. Wood. Third, H. Lingwood. Commended, Mrs. F. S. Arkwright.

GAME COCK.—First, J. Lane. Second and Third, H. Shield. Commended, J. Lane; H. Shield.

COCHIN-CHINA COCK.—First, J. Stephens. Second, J. Longland. Highly Commended, C. Wright.

PIGEONS.—First and Second, H. Yardley (Carriers, Owls, Pouters, Ice Pigeons, Spots, and Fairies). Highly Commended, T. Adams, Northampton (Carriers, Barbs, Baldpates, and Various).

Edward Hewitt, Esq., of Eden Cottage, Sparkbrook, near Birmingham, officiated as Judge.

SPALDING POULTRY SHOW.

THE following prizes were awarded at this Show, held on the 4th inst.

DORKINGS (Coloured).—First and Local Cup, J. W. Harrison, Spalding. Second, S. Onley, Cheltenham. Highly Commended, H. Lingwood, Barking, Needham Market, Suffolk; W. H. Robson, North Reston, South Lincolnshire; G. Clark, Long Sutton.

DORKINGS (Any other variety).—Prize, H. Lingwood.

GAME (Black-breasted and other Reds).—First, Local Cup and Second, J. Fletcher, Stonecough, Manchester. Highly Commended, J. Laming, Spalding; W. Verity, Beverley; S. Matthew, Stowmarket, Suffolk; C. Chaloner, Whitwell, Chesterfield. Commended, J. W. Harrison; C. Chaloner.

GAME (Any other variety).—First and Second, J. Fletcher (Duckwings). Highly Commended, T. Dyson, Halifax (Duckwings).

COCHIN-CHINA (Buff).—First and Cup, R. White, Sheffield. Second, J. H. Dawes, Birmingham. Highly Commended, H. Lingwood; T. Hardy, Peakill, Spalding. Commended, Col. Stuart Wortley, Grove End Road, London; Rev. S. C. Hamerton, Warwick.

COCHIN-CHINA (Any other colour).—First, S. Parke, Melton Mowbray, Leicester (Black). Second, S. Onley (White). Highly Commended, T. Hardy (White); J. W. Harrison (Cuckoo). Commended, J. Wright, Melton Mowbray.

BRAMA POOTRAS (Dark).—First, E. Leech, Rochdale. Second, F. K. Crook, Forest Hill, Kent. Commended, C. Caswell, Spalding; T. Hardy; F. James.

BRAMA POOTRA (Light).—First, H. Dowsett, Pleshy near Chelmsford, Essex. Second, F. Crook. Highly Commended, Miss E. S. Maples, Spalding; T. Hardy. Commended, Miss E. S. Maples; F. Crook.

SPANISH (Black).—First, Withheld. Second, J. Wright.

HAMBURGH (Any variety).—First, W. Wood, Sheffield. Second, H. Beldon. Commended, Rev. J. Hosegood, Long Sutton (Silver-spangled); T. J. Marshall, Tydd, near Wisbeach (Golden-spangled); C. Havers, The Beacon, Ingatstone, Essex (Golden-pencilled); J. F. Loversidge, Newark (Golden-spangled); S. Onley (Golden-pencilled); T. N. Granes, Skirbeck, Boston (Silver-pencilled).

GAME BANTAMS.—First, C. Jennings, Spalding. Second, J. Laming.

BANTAMS (Any other variety).—First and Second, A. Storrar, Peterborough (Black). Second, T. C. Harrison, Hull. Highly Commended, R. H. Weldon, Spalding (Japanese Silky). Commended, Messrs. S. & R. Ashton, Mottram, Cheshire (White); J. W. Harrison (Sebright).

FARMYARD CROSS.—First, Col. Stuart Wortley (French). Second, H. Beldon (Poland). Highly Commended, Col. Stuart Wortley (French); T. Hardy (Crève Cœur.)

DUCKS (Kouen).—First, E. Leech. Second, J. Wright. Commended, J. Wright.

DUCKS (Aylesbury).—First, E. Leech. Second, J. W. Harrison. Commended, H. Dowsett; J. W. Harrison.

DUCKS (Any other variety).—First, Cup and Second, J. W. Harrison. Highly Commended, T. C. Harrison. Commended, J. W. Harrison (Black East Indian).

GERSE (Any colour).—First and Second, T. Hardy (Toulouse.)

TURKEYS (Any colour).—Prize, J. Smith, Grantham.

PHEASANTS, AND ANY VARIETY OF ORNAMENTAL, FOREIGN OR DOMESTICATED POULTRY.—First and Cup, J. W. Harrison (Pousscock). Second, — Bates, Spalding (Silver Pheasants.)

SELLING CLASS (Any Variety).—First, S. Beebe, Walsall (Black Spanish). Second, J. Laming (Black-breasted Game). Commended, T. Dyson, Halifax; H. Dowsett (Aylesbury Ducks).

SWEEPTAKES.

SINGLE GAME COCK.—Prize, J. Fletcher. Commended, H. Sushall.

GAME BANTAM COCK.—Prize, J. W. Harrison.

PIGEONS.

CARRIERS.—First, E. S. Smith, Boston. Second, J. W. Harrison. Highly Commended, H. Yardley, Birmingham; R. Fulton, Deptford, London. Commended, J. W. Harrison; R. Fulton.

POUTERS.—First, J. E. Breward, Coventry. Second, R. Fulton. Highly Commended, H. Sushall; E. E. M. Roysds, Rochdale. Commended, R. F. Payling; H. Yardley; R. Fulton.

BARBS.—First and Second, R. Fulton. Highly Commended, H. Yardley. **TUMBLERS.**—First, R. Fulton. Second, J. Percivall. Highly Commended, A. Storrier. Commended, J. Ford, Monkwell Street, London; C. Cowburn, Leeds; A. Dore, Leeds; H. Yardley; R. Fulton; F. Key, Beverley; J. Hawley, Bingley, Yorkshire.

JACOBINS.—First, E. Horner, Harewood, Leeds. Second, H. Yardley.

Highly Commended, F. Key; E. Horner.

FAN-TAILS.—First and Second, H. Yardley. Highly Commended, J. W. Harrison.

ANY OTHER DISTINCT VARIETY.—First, Cup and Second, R. Fulton (Blue and White Owls). Highly Commended, J. Laming (Hvacinths); H. Sushall (Blue Turbils); E. S. Smith (Antwerps); R. F. Payling (Yellow Turbils); H. Yardley; E. E. M. Roysds; J. Thompson.

SELLING CLASS (Any variety).—First, D. Young, Leamington (White Dragons). Second, H. Sushall (Black Swallows). Highly Commended, J. E. Breward (White Pouters); J. W. Harrison (Pouters); H. Yardley. Commended, H. Yardley; R. Fulton (Shields); J. Thompson.

RABBITS.

HEAVIEST RABBIT.—First, Messrs. Hanson & Wagstaff, Doncaster. Second, J. T. Jealous, Spalding. Highly Commended, J. T. Leaton, Spalding.

LOP-EARED.—First and Cup, M. Millington, York. Second, Messrs. Hanson & Wagstaff. Highly Commended, Messrs. Hanson & Wagstaff; J. Taylor, Sheffield. Commended, H. M. Maynard, Hyde, Isle of Wight.

ANY BREED.—First, R. B. Wise, jun., St. Ives, Hunts. Second, J. Taylor.

FANCY VARIETIES.—First, R. B. Wise, jun. (Silver Grey). Second, J. W. Harrison (Angora). Highly Commended, Master C. Vise, Holbeach (Chinese). Commended, H. Cawood (Himalaya); J. W. Harrison (Himalaya); E. E. M. Roysds.

CAGE BIRDS.

CANARY (Any variety of colour).—First and Second, E. S. Smith (Buff and Yellow Belgian). Highly Commended, E. S. Smith (Variegated crested); J. Tye, Spalding. Commended, Mrs. Bowser, Spalding (Yellow Norwich).

MULE (Any variety).—First, E. S. Smith (Goldfinch Mule). Second, C. G. Harvey.

LINNET, GOLDFINCH, OR OTHER ENGLISH FINCH.—Prize, E. S. Smith (Goldfinch).

BLACKBIRD, THRUSH, STARLING, LARK OR OTHER ENGLISH CAGE BIRD.—Prize, Mrs. Wilson (Thrush).

PARROT, PARAKEET, LOBEY, OR OTHER FOREIGN BIRD.—First and Cup, Rev. P. Teale, Newmarket (King Parrot). Second, E. S. Smith (Parrot and Cage). Commended, J. W. Harrison (Grey young Parrot and Cage); G. E. Storr, Spalding (King Parrot); J. Barnes, Spalding (Australian Lorey); J. W. H. Tidswell (Grey Parrot).

JUNCO.—Edward Hewitt, Esq., Eden Cottage, Sparkbrook, near Birmingham.

A TURKEY'S REMONSTRANCE.

It is but too plain that we hold no place in the affections of your respected correspondent "Y. B. A. Z." since he has not included our class in his "Dottings at Salisbury." All our pens entered for that show were not sent, but we had a noble representative there in the first-prize pen.

Nor was the liberal accommodation provided for us at Salisbury less worthy of observation. One of the small paddocks placed at our service there must have been very acceptable to our brother after his long journey from the sister isle. May we be as fortunate at other shows.—A TURKEY WHO WAS AT SALISBURY.

[Guilty! Yes, I plead so to not having written of Turkeys in my "Dottings;" and although "mortals do rush in where angels fear to tread," yet I do not like, even though "mortal," to rush in on a subject I know but little about. But my friend the "TURKEY AT SALISBURY" greatly misunderstands my silence.

"No place in my affections!" I cannot plead guilty to this at any rate. If the answer is negative when Turkeys are in feathers, it is very far from that when they are without them. Let either of my Turkey friends that were at Salisbury, if they

doubt the point, present themselves with a goodly necklace of sausages, and I agree to pay them every possible attention, and I will show how fully I appreciate them.

I will, however, supply the omission of giving great credit to the Salisbury authorities for their capital arrangements as regards the Turkeys, Geese, and Ducks. These had ample room to move about; and I particularly noticed that the first-prize Turkey had plenty of room to spread his tail, and evidently thought no end of that and himself generally. Long may he live to spread it.—Y. B. A. Z.]

MAKING AN ARTIFICIAL SWARM—BEES DESERTING A UNICOMB HIVE.

A stock of Ligurians from Mr. Woodbury's apiary reached me safely in May last, and they are now doing well. On the 26th of June I tried to make an artificial swarm, being afraid of losing them, as I am often from home. I will describe the plan I have pursued, and will you then say if I have done right?

I found the comb on which the queen was, and placed it in another hive; and as the parent hive was very strong, I also took out a second comb, bees and all, and placed it in the same hive in which I had put the one containing the queen. I then lifted this hive away to a fresh stand a few paces off. I find the bees in the parent hive in a great state of commotion, having lost their queen, and the others accompanying the queen do not leave the hive much.

Have I done right? and may I expect a fresh queen to be raised in the parent hive, or what am I to do? I find them hanging about in large numbers outside the hive. I may say that I have had a super on the hive for a few days, but they did not go up, although I inserted therein a piece of new comb containing honey to entice them.

I have had a unicombe hive made, and put in it a swarm of bees. For about fourteen days they have done well, but, strange to say, last night (26th of June), about eight o'clock, they took wing and flew away. They were retaken by a neighbour, and to-night I intend replacing them in the unicombe. What was the reason of their leaving? and is it probable they will stay when I put them in again?—E. D.

[In making an artificial swarm by taking out the queen, you should have taken only the comb upon which she was at the time, and which you should have carefully scrutinised, so as to satisfy yourself that no inhabited royal cells were upon it, as, if any such existed, the queen should have been shifted to another comb. The remaining combs having been brought together, so as to leave the vacancy thus caused on one side, the old hive should have been shifted to a new position, the new one containing the queen and the abstracted comb being placed on the old stand. Managed in this way, the returning bees would have made up a good swarm, which would have built combs which the queen would have rapidly filled with eggs, and all would have proceeded in the same manner as if the swarm had issued naturally, whilst the young bees which knew not their way back to the old stand, and must perforce stick to their original domicile, would found royal cells and raise a young queen. You had better, therefore, transpose the two hives at once, and this will probably set matters right. If you suffer them to remain as they now are you are very likely to lose the original pure queen for want of a sufficient population, and any combs which may be built in the old hive before the bees have raised a young queen will have the vital defect of being drone combs.

There can be little doubt that some little violence is done to the instinct of bees when they are compelled to build a single large comb in a narrow space like the interior of a unicombe hive, and this may be the cause of yours having been deserted. Whether the returned bees may ultimately decide upon hearing the ills they have, or determine upon again flying to others which they know not of, is a problem which we find ourselves unable to solve.]

SWARMS UNITING.

In December last I purchased two stocks of bees in common straw hives, which I will designate A and B, the only difference between them being that A was a little heavier, and it also has a window. They progressed favourably during the winter, and on May 28th B swarmed, and my brother successfully lived the swarm (I will call this C). While he was hiving the bees A swarmed, and after flying about a dozen yards the

bees came back again and pitched all over the hive and backle of B. My brother then tried to brush them into an empty hive, but without success, as they crept into the hive (B). Did you ever hear of a similar occurrence?

On Thursday night, June 20th, we stopped the bees in by means of the usual perforated zinc slides, and moved them, after erecting a shed (we used backles before); we then replaced them in their former position. I then raised the slides. The bees in A and C seemed to be very little excited, whilst those in B rushed out all over the place. Next morning we found a great many dead, and for the next three days the bees continued to bring out dead, of which about half were drones, I should think about two thousand altogether. Do you think that they have killed the swarm that went into their hive, or can you account for it in any other way?

During the past week there has been a strange fatality amongst my bees. A great many bees are running about very wildly on the ground round the hive, and the only peculiarity that I see about some of them is that there are two yellow spots on the upper part of the first segment of the abdomen.—J. R. W., Bath.

[We have not ourselves met with a similar instance, but we believe the occurrence is not very unusual. It is not likely that the entire swarm was destroyed, although there was evidently a sharp fight. We often see single bees running about in the manner you describe, and always consider them as having been disabled in some way.]

TIME OF QUEEN BEES BREEDING.

CAN you inform me the number of days elapsing from the time of a Ligurian queen's release from the cell to the time of her capability for breeding, and how much time will elapse before she commences to deposit her eggs in the cells? Likewise, is there any difference between the Ligurian queens and the black English queens in these two particulars?—L. A.

[The period varies considerably. We consider fourteen days the average time which elapses from the hatching out of a queen to the commencement of egg-laying, but we have known a queen impregnated on the seventh day, and two queens which were hatched in our own apiary this season on the 30th of May, were impregnated on the tenth day, and, consequently, laid eggs on the twelfth or thirteenth day; from two to three days elapsing after fecundation before oviposition takes place. On the other hand, during a very favourable season, we have in one instance, found egg-laying delayed until the thirty-first day. These periods refer only to what are called "artificial" queens. When stocks swarm naturally, the young queens are, at any rate, very often capable of flight when they first issue from their cells, and in this case fecundation takes place earlier. There is no difference in these respects between Italian and common queens.]

DOES A SCARCITY OF HONEY IN THE SPRING INDUCE SWARMING?

I HAVE been led to ask this question of the readers of THE JOURNAL OF HORTICULTURE, in order to draw out the experience of some apiarists on the matter.

In past years I have sometimes felt inclined to smile, on hearing persons say that they could not induce their bees to take possession of supers. As a rule, I had always succeeded in this, and also in preventing swarms, by keeping the super with guide comb warm, and the stock cool. This year I have been at fault. In early spring I had two Ligurian stocks in Woodbury hives. They both promised well, and I determined to prevent swarming, and have honey instead.

Supers were put on each hive on the 18th of May, and progress was watched daily. The 30th of May gave me a swarm, weighing 5½ lbs., from one hive; and on the 11th of June the other hive swarmed. In this case the queen was unable to fly, so that the bees returned to the hive, but came off again with a second and third swarm. I may say here that the piping and second swarming in each case took place at an earlier date than is usual, and that I economised my queen cells as much as possible for artificial swarms. In the first hive I saw not fewer than ten queen cells.

Now, why did not the bees in these hives take to the supers? Those in the latter hive seemed to do so for some time, but they made very little comb, and I am now pretty well convinced that they merely occupied the super instead of crowding

and hanging outside, as we often see them do in common hives. If I am not becoming tiresome, I shall venture my own opinion, in order to be put right if I am wrong, as well as to draw out other opinions.

I am inclined to think that a scarcity of honey was the cause. For the 15th of June I find the following note in my Journal—"Weather dull and indifferent; no bee season yet." If there had been plenty of honey the bees would have formed comb, and stored the honey. As it was, they were obliged to be idle. Not so the busy and prolific queens, the cells were filled with brood, the bees rapidly increased in number, and swarms were the natural result.

I must bring this communication to a close for the present, but there are some other points to which I should like to draw attention, if space can be allowed.—CLERICUS, Cumberland.

[We shall be glad to hear from you again.—EDS.]

CONSEQUENCES OF SELLING FOUL BROOD.

ON the 18th of June I received a stock of Ligurians from Messrs. Neighbour & Sons, of Regent Street, and when I placed it in my bee-house I found from the smell emitted that it was suffering from foul brood.

Will you inform me whether travelling for six or seven hours in a well-ventilated Woodbury hive little more than half filled with combs, and not half filled with bees, could produce virulent foul brood?

In the spring of 1866 I received my first stock of Ligurians from Messrs. Neighbour & Sons, and with it came this terrible disease which has destroyed six stocks of bees.—A MANTYR to FOUL BROOD.

[Foul brood could not possibly have been spontaneously developed in a healthy colony under such circumstances. The stock must have been diseased before it left Messrs Neighbours' apiary.]

OUR LETTER BOX.

FOOD FOR DUCKLINGS (F. M.).—Ducklings may be fed on oatmeal, some graves, curd, chopped onion tops. As they grow older, discontinue these one by one, until you have reduced them to plain oatmeal, and then plain oats.

SICKLE FEATHERS OF HAMBURGH COCK NOTCHED (Poultry Fancier).—As a rule any distinguishing mark in the plumage of a bird sent for exhibition is a disqualification. The marks in the tail would be so, if there were close competition, or if the birds had to be carefully scanned. They would under any circumstances disqualify a Silver-spangled cock. They would be detrimental to Golden and Silver-pencilled.

GOLDEN-PENCILLED HAMBURGH PULLETS (H. B. C.).—You are quite right to set your eggs on the ground. It is a cause of success. In Pencilled Hamburgs there are many spots that show in the first chicken feathers that never show afterwards; at all times and ages, we prefer the clear hackles, but you must recollect the pencilling that is objectionable in the hackle is essential to the body. We therefore advise you to select the pullets that are most alike to adults in plumage, bearing in mind that a few spots on the hackle may be tolerated or overlooked, but a lack of pencilling on the body is fatal to success. The pullets should not be pencilled on the hackle.

GREEN FOOD FOR FOWLS (K.).—We give watercress, endive, and lettuce freely to our fowls. There is no occasion to mix it with other food, they are fond of it. Rue is an old poultry medicine, but we do not believe in or use it.

POULTRY IN VERY LIMITED SPACE (H. H. B.).—We know only two breeds that would do well in the space you mention—15 feet by 14. They are the Spanish and the Houdan. They are non-sitters. It would be useless to set eggs in the space you mention, as it would be impossible to rear the chickens. Being surrounded by a wall so high as you mention, it will, we fear, keep off the sun. Can you not contrive to let some of the rays and warmth fall on the poultry? You will find the best green food you can give will be grass cut in large sods in a growing state. The fowls will eat it all and scatter the mould in search of insects, deodorising and purifying the whole run. You will not, perhaps, believe us when we say that hens and chickens do no harm in a garden. We believe they often do good provided the hen is kept up.

CAPONISING (Pattin).—We know of no work on this cruel and needless practice. Richardson's "Domestic Fowl" has a chapter on the subject.

PARROT PLUCKING ITSELF (A Subscriber).—Do not let the bird have any animal food, but plenty of ripe fruit, and a tepid bath once or twice daily. If the bird will not bathe in a dish filled with tepid water, pour it over the bird through the rose of a watering-pot.

ROSE WATER (A. B. J.).—To make it from rose leaves, distillation is required.

MITES IN BIRD CAGES (G. Cole).—We have no doubt that filling the crevices with colza oil as you recommend, would be as efficacious as linseed oil, which is usually employed, and then flowers of sulphur dusted on to the oil.

FRENCH POLISH (Housewife).—Shellac, 1½ oz.; nastic, half oz.; sandarac, half oz.; rectified spirits of wine, 20 ozs. Mix them, and keep in a gentle heat, frequently shaking the bottle until all the resins are dissolved. Apply very little to the furniture, and rub hard until the polish is established. Of horsehair beer we know nothing. The fowls to keep in a confined space are mentioned in an answer to another correspondent to day.

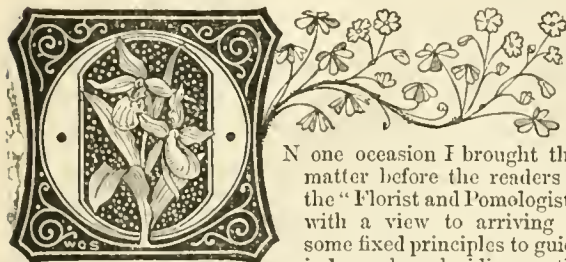
INSECTS IN PRESERVES (S. L.).—The insects are mites, or acari, they would be excluded from the preserves by tying the jars closely with bladder.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	JULY 18—21, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.	
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.				
18	Th	Royal Horticultural Society's Bury Show Sun's declination 20° 43' N. [closes. 5 SUNDAY AFTER TRINITY.	74.6	50.2	62.4	19	5	47	4	46	48	47	45	17	5	53	199	
19	F		73.2	50.3	61.7	21	6	4	5	8	14	9	50	6	5	53	200	
20	S		72.9	50.3	61.6	22	8	4	4	8	40	9	54	7	19	6	201	
21	SUN		73.5	50.7	62.1	18	9	4	3	8	5	10	0	9	20	6	5	202
22	M		73.3	51.5	62.4	23	10	4	2	8	31	10	8	10	21	6	8	203
23	Tu		74.1	51.8	62.9	20	12	4	1	8	58	10	17	11	22	6	10	204
24	W		72.8	51.9	62.4	14	13	4	59	7	27	11	after	(	6	12	205

From observations taken near London during the last forty years, the average day temperature of the week is 73.5°; and its night temperature 50.9°. The greatest heat was 89°, on the 23rd, 1854; and the lowest cold 32°, on the 23rd, 1863. The greatest fall of rain was 1.37 inch.

JUDGING GRAPES.



On one occasion I brought this matter before the readers of the "Florist and Pomologist," with a view to arriving at some fixed principles to guide judges when deciding on the merits of Grapes, and I am induced to revive the subject by the discussions I heard around the fruit-table at the recent Exhibition at Manchester; discussions which made it perfectly evident that no fruit-grower can tell beforehand what are the points of excellence that are to be most in his favour as an exhibitor of Grapes, unless he knows who the judges are to be, and their peculiar ideas on the subject.

On the occasion referred to Mr. Meredith exhibited the largest bunches and berries of Hamburgs, but they were inferior in point of colour to Mr. Dixon's, and the Judges put them equal first. I, however, heard their judgment called in question by those who considered that on the ground of their superior colour Mr. Dixon's ought to have stood alone in the first position.

The whole subject of judging Grapes was thus brought up, and it was perfectly evident that opinions differed from each other as far as the poles are asunder.

Under these circumstances is it not possible for the Fruit Committee of the Royal Horticultural Society to draw up and publish a set of rules for judging Grapes? This would not only relieve judges of much unpleasant controversy, but also enable exhibitors to select such bunches as came nearest a recognised standard.

Common sense seems to suggest, that as the primary object in growing Grapes is that they may be eaten, the palate should be the final court of appeal; yet, I believe, it is seldom had recourse to, the generality of judges maintaining that flavour and colour always go together, than which there cannot be a greater mistake. The finest Hamburg Grapes in flesh, size of berry, and flavour I ever tasted were brown, while I have tasted the same Grape jet black, yet sour.

By way of suggestion, I would give to the highest flavour 3 marks; finest colour, 2 marks; size of berry, 2 marks; size of bunch, 1 mark; shape of bunch, 1 mark; bloom, 1 mark.

Thus 10 marks would constitute the highest relative excellence. These marks to be modified so as to run parallel with the merits of the points of each exhibition.

It may be perfectly true that no set of rules can be framed that will absolutely meet every case, yet some approach to correct ideas on the subject may be arrived at; and I have no doubt some of your correspondents will contribute their views of the matter, and thus aid the

solution of what is at present a vexed question.—WM. THOMSON, *The Gardens, Dalkeith Park.*

NOTES ABOUT STRAWBERRIES.

As this is the best time for purchasing Strawberry plants, and as I have tried some of the most popular sorts during the last three years, a few remarks on these may be useful to some of your readers.

I have grown in that time Black Prince, Keens' Seedling, Hooper's Seedling, sent instead of Sir Harry (I would remark here that it is of the utmost importance for those who send out new plants to be very careful that no spurious varieties are mixed with them, or a different sort altogether sent, as I did not obtain a single plant of Sir Harry amongst them), Rivers's Eliza, Duc de Malakoff, Prolific Hantbois, President, Sir Joseph Paxton, Eclipse, La Constante, Sir Charles Napier, British Queen, and Dr. Hogg. I still grow Black Prince for very early forcing, and it is succeeded by Keens' Seedling.

I grow my plants in three different ways—namely, in pots for forcing, in ground vineries for succession, and in the open borders.

For early forcing it is as well to have the Black Prince layered in June, followed by Keens' Seedling. The later sorts I layer some time before the middle of July, or even further on in the season; my system is to layer the runners in 60-sized pots, using a mixture of good loam and rotted dung, and they may be severed from the parent plant in three weeks; but this is best ascertained by turning a few of them out of the pots, and if the roots are running down the sides of the pots the runners may be removed from the plants, and regularly watered two or three times a-day at first. As soon as the pots are well filled with roots the plants must be shifted into the fruiting pots, using five-inch pots for the very early sorts, and six-inch pots for the later sorts.

To those, however, who have no accommodation for Strawberries in pots, and yet would like to have a few fruit three weeks earlier than they can be had from the open borders, I would recommend the ground vineries; these are within the reach of people of moderate means, and they are excellent for growing Strawberries. I plant two rows in a ground vinery $3\frac{1}{2}$ feet wide at the base and 20 inches deep in the centre. A ground vinery of the above dimensions glazed and painted, the glass 21-oz. to the foot, costs about £3 16s.; it will be 28 feet long, and there is no other expense entailed, except a row of bricks laid end to end for the base of the vinery to rest upon, and one brick to be reserved for each seven-feet length (they are made in seven-feet lengths). These bricks are for the purpose of tilting it up in very warm weather, as without this precaution the foliage is very apt to be drawn up weakly, a state of matters which does not evidence the best cultivation.

I need not detail the out-of-door cultivation, except that the ground, where it admits of it, ought to be deeply trenched, and a liberal dressing of good manure dug in, as, if the roots do not penetrate into the ground, they do not withstand the drought, and there are very few private

establishments where the beds can be watered; for stove and greenhouse plants, vineries, Peach-houses, Cucumber and Melon-pits, &c., take up so much time in hot weather. It is a great advantage to water them, but they ought to be mulched at the same time.

I will now state my opinion of the various sorts, which may be different from the experience of other cultivators; soil, climate, and treatment, I have no doubt, making a great difference.

The best variety for pot culture, and perhaps the best for out of doors, is *La Constante*. The fruit is of large size, regularly shaped, and equal sized, while the dwarf compact habit of the plant is an important feature. It ought to be planted more closely than the other sorts out of doors—say 20 inches from plant to plant. I generally plant them 2 feet apart.

British Queen does well here, and comes next in favour. Dr. Hogg very much resembles this variety; when both are grown together in pots they cannot be distinguished. The latter has not such equal-sized fruit as *British Queen*, its flavour is quite as good, and out of doors it is, perhaps, the higher coloured.

President, and *Sir Joseph Paxton*, are sorts of which I think highly; the former is the better bearer, but the fruit of the latter is more handsome. I will grow both largely next season.

Eclipse is a very prolific variety, and good for forcing, and I have seen it planted largely this season.

Sir Charles Napier is a very tender variety. My pot plants were plunged in cocoa-nut fibre in a cold frame, and most of them were injured by the severe frost which we experienced last winter. The fruit is too acid, but it is preferred by market gardeners to any other sort, for I believe they can obtain a larger quantity of fruit from a given number of plants, than they can from any other, and it takes well in the market.

Seedling Eliza does not do well here, it bears a good crop of regular-sized fruit, but they are only of the medium size; it is also deficient in colour.

Duc de Malakoff has fruit of the largest size, and when well ripened of a good colour, but it is soft and inferior in flavour to most of the other varieties which I grow.

Prolific Hautbois will not do here (Ilford, Essex). It does not bear half a crop of very inferior fruit. The plants grow very luxuriantly.

Hooper's Seedling is a good cropper, and very much resembles *Keens' Seedling*.

The soil here is of a light sandy nature, resting on a gravel subsoil, so that it is not naturally suited to Strawberries. Nevertheless we obtain good crops by manuring well, and digging in large quantities of a sound yellow loam.—J. DOUGLAS.

JOTTINGS AT SOME OF THE RECENT EXHIBITIONS.

If our friend, Mr. D. Beaton, had been spared to the present day, what long and interesting descriptions he would have given of the novelties that have appeared within the last year or two! He would have almost filled "our Journal" with his lucid and humorous descriptions. His delight would have known no bounds had he been permitted to see what grand results have crowned the labours of his declining years. He, without a doubt, was the pioneer who cut through all difficulties and led the way to the present splendid race of Zonal and Nosegay Pelargoniums. The splendid baskets of *Duchess of Sutherland* and *Lady Constance Grosvenor*, exhibited by Mr. Turner, and the fine Nosegay *Mrs. Laing*, exhibited at the recent Show in the Regent's Park, illustrate the great progress that has been lately made. I have also this season a large batch of seedlings of great promise, amongst them many new and beautiful shades of colour, with flowers very large, some of them being as much as 2 inches across; several of them are of yellow shades. I feel confident that a bright yellow will be produced in the course of a season or two; if so, it will be a grand and most useful addition to the flower garden. We want a good yellow-flowering plant to take the place of the yellow *Calceolarias*, for it appears to be quite useless to plant them in many places; the peculiar disease that attacks them remains a mystery.

At the Royal Horticultural Society's Rose Show Messrs. E. G. Henderson exhibited two plants that will become great favourites for bedding purposes. The pretty and distinct-looking *Pyrethrum Golden Feather* will be largely cultivated. It is a most useful plant for marginal purposes; so also is the pretty dwarf and free-flowering *Lobelia pumila elegans*, exhibited by them. With the following plants I could make one

of the grandest and most compact beds ever seen. We will suppose that we have a large circular bed to plant—say 12 feet across. Well, we would plant it as follows, beginning with a centre of, say 3 feet, of *Lady Constance Grosvenor Pelargonium*; next to this a ring, 18 inches wide, of *Viola cornuta*; next an 18-inch band of *Verbena Princess Victoria*; then 18 inches of *Viola lutea*; next to this 18 inches of *Lobelia pumila elegans*, finishing with a band, 18 inches wide, of *Pyrethrum Golden Feather*. In situations where *Coleus Verschaffeltii* will grow well, the centre of the bed would look well if composed of it. Another plant I saw exhibited at the Regent's Park, and afterwards in a much better condition at the Royal Exotic Nursery. This in the next three or four years will be propagated for bedding purposes by the million. It is a very pretty hardy *Nierembergia* from the Plate River, introduced by the Messrs. Veitch. The flowers are about 1½ inch across, and of a pretty white colour, elevated on a slender tube, 1 to 1½ inch long, above a beautiful carpet of rich green foliage. The plant is perfectly hardy, and a perpetual flowerer. Here, then, in *Nierembergia rivularis* we have another most useful and graceful addition to the flower garden. The plant grows very freely, and forms a dense carpet of beautiful green foliage, above which the pretty white flowers are seen with great effect. They appeared like a mass of Snowdrops peeping up above their foliage in early spring. I at once ordered some plants, and shall propagate them as fast as possible, as I intend using it extensively in the ribbon-borders, &c., next year. Being a novelty of great merit it is rather expensive at present, but I have no doubt it will come within the means of every one next season. This might be used with great advantage instead of the *Pyrethrum* in a similar arrangement to that mentioned above.

Another useful *Lobelia* I saw at the Regent's Park was named *speciosa Lindleyana*. It is a dwarf-growing and a remarkably free-blooming variety, of a lively shade of violet blue, with a white centre. One of the best of all the *Lobelias* for bedding purposes is a variety I obtained for Mr. Tyerman, of the Liverpool Botanic Gardens, last year, under the name of *Blue King*. It is a free-growing and remarkably free-flowering variety, and the flowers are of a beautiful sky-blue shade. I consider it quite an acquisition. It is so distinct from *Lobelia speciosa* in colour, that it might be planted by the side of it. It is also easily kept through the winter months.

At the Manchester Exhibition I was very much struck with *Viola amœna*. This, no doubt, will be also a very useful plant. It is very dwarf, and has an intermediate style of growth between *V. cornuta* and *lutea*, and may be planted between these varieties with good effect. The colour is a deep violet purple.

At the same Exhibition Mr. Watson, of the New Zealand Nursery, St. Albans, exhibited a good Nosegay, which appeared to be a fine improvement on *Lord Palmerston*. The habit appeared to be good, and the truss was large and well filled up. The colour is a pretty rosy salmon. Mr. Watson also exhibited his *Tricolore Miss Watson* and *Mrs. Dix* at the Manchester and other shows. They are certainly very pretty, and I hope Mr. Watson will make his fortune with them; if he do not, it will not be for want of energy in bringing them before the public. Mr. Cunningham's pretty Ivy-leaf *Pelargonium L'Elegante* is also a good thing, and likely to prove very useful both for bedding and conservatory decoration. Mr. Bull's *Silver Gem* is also a most useful plant for the above purposes. It is certainly well named—it is a perfect gem, and if grown in a cool house for some months and then placed in heat the leaves will assume a pretty pink shade. I think the plant exhibited at the Tricolor Show on the 21st of May as a new variety was *Silver Gem*, grown as above described, for I have had many plants this season exactly like those shown on that occasion.

On the 3rd of July I made a hurried visit to Waltham Cross. The Roses were most beautiful although the weather was very much against them. We were a little too early to see Mr. Paul's bedding *Pelargoniums*; but from what I have seen of the following, some of them under my own care and others bedded out there, I have put them down as useful and very effective bedders, and varieties that may at once be ordered and propagated in quantity:—*Blue Bell*, flowers bluish lilac, large, and the truss well formed; pretty compact style of growth. *Crimson Queen*, this is a grand colour, the plants very dwarf; this will make a magnificent bed. Dr. Hogg, fine purplish rose, good habit, the plant producing large quantities of immense trusses of well-formed flowers. *Enchantress*, flowers pretty soft crimson with distinct scarlet eye, habit good; this is also a fine bedding plant. *Firefly*, flowers scarlet crimson, good

habit. Glory of Waltham, flowers splendid scarlet, habit good, neat foliage; a magnificent bedding plant. Lilacinum, flowers a pretty shade of bright lilac, splendid truss, and fine habit. Memnon is a grand Stella with a magenta-coloured flower, the habit is good, and the style of growth very neat. Purple Queen is also a fine bedding Nougay. Jason and Waltham Gem are two good Gold-leaved varieties. The greatest novelty I saw amongst Pelargoniums was a double Tom Thumb. This variety has most probably been obtained by a sport from Tom Thumb. It has the exact habit of the General, and flowers quite as freely, but the flowers are double. This will be a most useful variety for hybridising purposes. If we can only get our Gloire de Nancy with the habit of Mr. Paul's double Tom Thumb, they will be most useful. That is at present the greatest fault in them, they grow too strong. What we want is nice compact plants from 9 to 15 inches high, with eight or ten trusses of fine double flowers on them. In this state they would be most useful for conservatory decoration. I must not forget to mention the two beautiful new herbaceous Phloxes, exhibited by Mr. Paul at the Rose Show on the 2nd, and at the Regent's Park on the 3rd. They far surpass anything I have seen; their names are Beautiful and Conqueror. I saw a large bed of them growing at Waltham. They were a sight I shall not easily forget. Beautiful is as its name implies; it has immense spikes of large round flowers, pure white, with a rosy violet centre, and Conqueror is a creamy white with a rosy purple centre, the base of the petals round the centre being suffused with the same colour; they appear to be very dwarf-growing varieties. In walking through the nurseries Mr. Paul called my attention to a pretty golden-leaved Quercus; the foliage was quite as bright as Pelargonium Golden Fleece. I was very much pleased with my visit to Waltham. My only regret was that I could not spare more time to inspect the numerous forms of floral beauty to be seen there. The Roses alone would have afforded me amusement and interest for three times the time I could spare for an inspection of the whole. I, however, will again visit Mr. Paul's nurseries when the Pelargoniums are in perfection, and then I hope to have more time to examine their beauties.

In concluding these few notes of what I have seen likely to prove useful to the readers of "our Journal," I will just mention a few of my own productions. These I need say but little about, as they have been before the public. Amongst the Gold Zonals (as they have lately been styled), the following I am sure will give satisfaction:—Perilla, Model, Compactum, Firebrand, Beauty of Ribblesdale, Beauty of Calderdale, Princess Alice. The general opinion of them is that they will supersede the Tricolors for bedding purposes; they are certainly much easier cultivated, and are much more effective, they at once attract the eye, and are seen with good effect a long distance off, whilst the Tricolor loses its effect at a short distance. Amongst my Tricolors I consider Lottie Wills, Aurora Borealis, Lizzie, Fanny, Beauty of Huntroyde, and Florence are not to be easily surpassed. The latter variety will be found to surpass every Tricolor at present sent out for bedding purposes. I am so confident of this, that I am prepared to exhibit six plants of it in September, taken up from the open ground, against six plants of any other variety at present in cultivation for the sum of £5.—J. WILLS.

TIME FOR TAKING CUTTINGS.

In the "Science and Practice of Gardening," page 256, I find that "the time for taking off cuttings from the parent plant for propagation is when the sap is in full activity;" but upon referring to "Thompson's Gardener's Assistant" I find that "the worst time for taking cuttings from hardy deciduous trees and shrubs is when the sap is in full flow" (see page 380). Will you explain how writers upon horticulture so far disagree upon a point so essential?—AMATEUR.

[Circumstances alter cases, and, therefore, there is only a seeming disagreement in the directions. In the "Science and Practice of Gardening" allusion is made chiefly to the propagating by cuttings of tender plants that are to have the advantage of pots, hotbeds, &c., and in that case the directions are right. All you have to do is to keep a cutting in a state as nearly as possible like that which it possessed on the parent plant, and, therefore, care must be taken to arrest evaporation and encourage rooting. As respects hardy deciduous shrubs, Mr. Thompson is just as correct, and this you may satisfy yourself of easily by inserting a cutting of a Currant bush in

the open air now, and inserting a similar but leafless cutting during winter and spring. These are left to nature, the former is assisted beyond nature.]

FLOWERS IN BLOOM DURING JUNE.

ACKLAM HALL, MIDDLESBOROUGH-ON-TEES.

June 3. Brompton and Intermediate Stocks.	June 23. <i>Orobanchis niger</i>
<i>Centaurea montana</i>	Double Nasturtium
<i>Lycneis dioica flore-pleno</i>	<i>Lilium Martagon</i> , purple
Iris, various kinds	Roses, double and single
<i>Veronica gentianoides</i>	yellow Persian
<i>Geum urinaum</i>	Saadragons, various
<i>Orchis ustulata</i>	<i>Dianthus odoratus</i>
Scarlet Thorns, single and double	doloides
Scarlet Chestnut	<i>Cerastium tomentosum</i>
<i>Silene quinquevulvora</i>	<i>Pyrethrum roseum</i>
" 5. <i>Andromeda axillaris</i>	<i>Epilobium angustifolium</i>
<i>Hesperis matronalis</i>	album
<i>Ranunculus repens</i>	" 21. <i>Lathyrus splendens</i>
<i>Vicia sepium</i>	<i>Geranium sanguineum</i>
" 7. <i>Ornithogalum umbellatum</i>	<i>Philadelphus</i>
narbonense	Sweet William, various
fimbriatum	<i>Galceobdolon luteum</i>
<i>Weigela rosea</i>	<i>Lanum maculatum</i>
<i>Aquilegia vulgaris</i>	<i>Campanula glomerata</i>
<i>Asphodelus ramosus</i>	<i>Parietaria officinalis</i>
<i>Veronica deolata</i>	<i>Campanula pusilla</i> and
" 10. <i>Polemonium Richardsoni</i>	alba
<i>Lythospermum purpureum</i>	<i>Deutzia scabra</i>
<i>Mimulus luteus</i>	<i>Centranthus ruber</i> and
Mule Pink	albus
" 14. <i>Dianthus caryophyllus</i>	<i>Potentilla Hopwoodiana</i>
Roses, various kinds	Barratii
<i>Linaria cymbalaria</i>	<i>Phlox Drummondii</i>
bipartita and splendens	<i>Heliotropium peruvianum</i>
<i>Erigeron canadense</i>	various kinds
<i>Digitalis purpurea</i> and	<i>Calceolarias</i> , various kinds
alba	<i>Achillea clavensis</i>
<i>Mimulus moschatus</i>	rosa
<i>Campanula rapunculoides</i>	Nasturtium, various kinds
<i>Silene nutans</i>	" 20. <i>Eschscholzia californica</i>
<i>Mesquilia germanica</i>	<i>Calandrinia speciosa</i>
<i>Alchemilla conjuncta</i>	discolor
<i>Nepeta violacea</i>	Scarlet Pelargoniums
<i>Cornus sanguinea</i>	<i>Spiraea aruncus</i>
<i>Aconitum napellus</i>	<i>Astrantia major</i>
<i>Geum coccineum</i>	<i>Symphytum echinatum</i>
<i>Dictamnus ruber</i> and	aspernium
albus	<i>Silene compacta</i>
<i>Papaver concolor</i>	<i>Hedychium coronarium</i>
<i>Saxifraga pennsylvanica</i>	<i>Iberis coronaria alba</i>
Andrewsii	rabra
<i>Geum rivale</i>	<i>Papaver somniferum</i> , dbl.
<i>Teucrium lucidum</i>	<i>Campanula grandis</i>
<i>Allium schoenoprasum</i>	<i>Salvia pratensis</i>
ursinum	<i>Ruta graveolens</i>
" 16. <i>Polygala vulgaris</i>	<i>Viola erecta</i>
<i>Orchis maculata</i>	<i>Sedum rupestre</i>
<i>Barbarea vulgaris</i> fl.-pl.	sexangulare
<i>Hesperis matronalis</i> fl.-pl.	acro
" 20. <i>Rhododendron hirsutum</i>	<i>Verbascum thapsus</i>
<i>Delphinium formosum</i>	Obervil
Barlowii	<i>Thymus serpyllum</i>
mesoleucum	" 20. <i>Moraea persica</i>
" 22. <i>Anchusa italica</i>	<i>Campanula pyramidalis</i>
	<i>Saxifraga granulata</i>
	granulata plena
	<i>Thymus serpyllum albus</i>

GLASS WALLS.

THE above contrivances for more thoroughly ripening fruit have lately been introduced by the inventor of the cylinder vinery, on the principle of which they have been constructed. The glass wall is placed either opposite walls of slate made on purpose, or opposite to brick and stone walls already built, the fruit trees being trained against the glass wall on the inside, so as to receive the reflected heat from the wall opposite. The great benefit to be derived from this mode of growing fruit is light given in every direction both to the leaves and fruit.

The mode to be pursued in constructing a wall of this kind opposite to one already built is as follows:—I drive into the earth, about 3 feet from the old wall, square bars of wood, grooved about five-eighths of an inch deep in the angles, boiled in creosote, and thus rendered indestructible. I slip glass down the grooves until the top of the bars is reached. I then nail a plate on the top of the bars to strengthen the glass, and also to admit of a cover being placed on the structure to keep off spring frosts. I nail small rafters from the glass wall to the brick or stone wall. After frosts are over I remove the cover, when the trees are exposed to dew and rain. They require no watering and no further attention than an ordinary wall. The result of this mode of culture is the perfection of growth.

I find the best and cheapest covering is the material made for packing Hops; it is 6d. a square yard retail. Boiling in creosote would render it indestructible.

Glass walls can be made on the same principle. Facing each other, and running north and south, they might be made

10 feet high and 4 feet apart, open at the top. The trees can be trained on each wall. I have never seen foliage so healthy and of such deep colour as on this principle. The temperature is always higher, and when the sun is out from 10° to 12° higher than the external air.—OBSERVER

DESCRIPTIVE LIST OF HERBACEOUS PLANTS.

(Continued from page 5.)

	MONTHS OF FLOWERING.	HEIGHT IN FEET.	COLOUR OF FLOWER.	SOIL.	PROPAGATION.	
<i>Hieracium aurantiacum</i> e	June and August	1½–2	orange	loam and grit	division	
<i>Hierochloa borealis</i> r c	May and June	1	a Grass	very sandy loam	division	Soil moist.
<i>Horminum pyrenaicum</i>	June and July	1–1½	blue	loam	division	
<i>Houstonia cerulea</i> e r	May to August	1–1½	light blue	peat, loam, and grit	division	Soil moist.
* <i>Hypericum calycinum</i>	June to September	1½	yellow	peat, loam, and grit, or limestone	division	
<i>H. nummularium</i> e r	June and July	1	yellow	peat, loam, and sand	division	
* <i>Iberis saxatilis</i>	May and June	1–1½	white	loam and grit	cuttings	
* <i>I. Tenoreana</i>	June	2	pale purple	sandy loam	cuttings	
* <i>Imperata sacchariflora</i>	July and August	6	striped fol. sil. plumes	sandy loam	division	
* <i>Iris germanica</i> vars.	June	2–3	blue shades	loam	division	
* <i>I. florentina</i>	May and June	2	white	loam	division	
* <i>I. pallida</i>	May and June	2–3	pale blue	loam	division	
* <i>I. foetidissima</i> fol. var.	June	1½	striped leaves	loam	division	
* <i>I. pumila</i>	May and June	1½–2	purple	loam	division	
* <i>I. austriaca</i>	April and May	2	striped	loam	division	
<i>Jeffersonia diphylla</i> r	May and June	3–1	white	sandy loam	division	
* <i>Lathyrus grandiflorus</i>	June and August	4	purple	sandy loam	seed	
* <i>L. latifolius</i> vars.	June to September	5–6	purple and white	loam	seed	
<i>Liatris scariosa</i>	September & October	3–4	purple	peat and loam	division	
<i>Lindophaea spectabilis</i> r	June and July	2	deep blue	sandy loam	division	
* <i>Linum flavum</i> e	June to August	1	yellow	sandy loam	cuttings	Sheltered situation.
* <i>L. monogynum</i> e	June to August	2	white	sandy loam	seed and cuttings	
<i>L. Lewisii</i>	June and July	2–3	blue	sandy loam	seed	
<i>L. perenne</i> flore albo	June and July	2	white	calcareous loam	seed	
<i>L. narbonneuse</i> r	May to July	2	blue	sandy loam	cuttings and division	Warm sit.
* <i>Lobelia fulgens</i> e	June to September	3	scarlet	loam	division	Dry in winter.
* <i>L. fulgens</i> St. Clair e	June to September	3	scarlet	loam	division	Moist in summer.
<i>L. sylvatica</i>	August to October	2	light blue	sandy peat	cuttings and division	
<i>L. urens</i>	June and July	1½	light blue	sandy peat	seed and division	
<i>Lychnis chalcidonica</i>	June and July	2	scarlet	peat, loam, and grit	cuttings and seeds	
<i>L. viscaria flore pleno</i>	June and July	1½	purple	peat, loam, and grit	division	Sunny exposures.
* <i>L. viscaria splendens</i> e	June and July	1	pink	peat, loam, and grit	division	
* <i>L. Haageana</i> e	June to August	2½	orange	loam and peat	cuttings and division	
<i>L. pyrenaica</i> r	June and July	1–1½	pink	peat and grit	division	Soil moist.
* <i>Lupinus polyphyllus</i>	June and July	3–4	blue	loam	seed and division	
* <i>L. polyphyllus albidiflorus</i>	June and July	3	white	loam	division	
<i>Lythmaea verticillata</i>	July and August	1	yellow	peat, loam, and grit	division	Soil moist.
* <i>Lythrum roseum superbum</i> e	June to August	2–3	rose	peat and loam	cuttings and seed	
* <i>Mecanopsis cambrica</i>	June to August	1–1½	yellow	loam, grit, or gravel	seed and division	
<i>Melissa grandiflora</i>	June to September	1½	red	sandy loam	division	
<i>Melittis melissophyllum</i>	June	1–1½	flesh	sandy loam	division	Slight shade.
* <i>Mimulus moschatus</i>	July to September	1	yellow	sandy peat and loam	seed and division	
<i>M. roseus palidus</i>	June to August	1½	rosa spotted	loam	division	Soil moist.
* <i>Myosotis palustris</i> e	May to August	1	blue	loam and grit	division	
<i>Myrrhis odorata</i>	May and June	2–2½	white	sandy loam	division	
<i>Oenothera Fraseri</i>	May to September	1½–2	yellow	peat, loam, and sand	division	
<i>O. fruticosa</i>	May to August	2½–3	yellow	peat and loam	division	
<i>O. aculeata</i>	May to September	1½–2	white	peat and loam	seed	Warm situation.
* <i>O. macrocarpa</i> e	July and August	1	yellow	peat and loam	seed and division	
* <i>O. taraxacifolia</i>	June to September	1	white	peat and loam	division and seed	
* <i>O. grandiflora</i> (Lamarckiana)	September & October	3	yellow	loam	..	
* <i>Omphalodes verna</i> e	March and April	1	blue	loam and leaf mould	division	Slight shade.
* <i>Orobis vernus</i> e	March and April	1	purple	sandy loam	division	
<i>O. angustifolius</i>	May and June	1	white	loam	division	
<i>O. niger</i>	June and July	3	purple	loam	division	
<i>O. aurantiacus</i>	June and July	1½	orange	loam	division	
<i>Oenothera tauricum</i> re	May and June	1	yellow	peat and loam	layers	
* <i>Oxalis tropaeoloides</i>	July to September	2–3	yellow	sandy loam	seed and division	
<i>Paeonia albidiflora</i> vars.	May and June	2	white	rich sandy loam	division	
* <i>P. albidiflora Humel</i> e	..	..	double crimson	..	..
<i>P. albidiflora tatarica</i>	..	..	flesh	..	..
* <i>P. albidiflora Whitley</i> e	..	..	double white	..	..
<i>P. albidiflora sibirica</i>	..	..	white	..	..
<i>P. albidiflora fragrans</i>	..	..	red	..	..
<i>P. albidiflora vestalis</i>	..	..	white	..	..
* <i>P. tenuifolia flore pleno</i> e	..	..	double red	..	..
<i>P. decora</i>	..	..	purple	..	..
<i>P. paradoxa</i>	..	..	purple	..	..
* <i>P. paradoxa fimbriata</i> e	..	..	double fringed purple	..	..
<i>P. peregrina compacta</i>	..	..	purple	..	..
<i>P. peregrina oxoniensis</i>	..	..	blush	..	..
<i>P. daurica triterata</i>	..	3	pale purple	..	..
<i>P. corallina</i>	..	3	red	..	..
<i>P. humilis</i>	..	14–2	pale purple	..	..
<i>P. officinalis albicans</i>	..	2–3	white	..	..
<i>P. officinalis carnescens</i>	..	..	white	..	..
* <i>P. officinalis rubra plena</i> e	..	..	double red	..	..
<i>P. officinalis anemoniflora</i>	..	..	red	..	..
<i>P. officinalis Sabini</i>	..	..	crimson	..	..
* <i>Papaver bracteatum</i> e	June and July	3–4	scarlet	loam	division	
* <i>P. nudicaule</i>	June to August	1½	yellow	peat, loam, and grit	seed	
* <i>P. orientale splendens</i> e	June and July	3	scarlet	loam	division	
<i>Phalaris arundinacea vittata</i>	June and July	3–4	Striped Ribbou Grass	sandy or gravelly loam	division	
<i>Pentstemon</i> , many varieties	May to October	1–2	various	loam	cuttings	Warm situation.
* <i>Phlox</i> , named vars. e	June to August	2–3	various	rich loam	cuttings and division	
<i>Phlox verna</i> e	May	1	rose	gravelly loam	cuttings and division	
* <i>P. ovata</i>	May to July	1–1½	pale purple	peat and loam	division	
<i>P. setacea</i>	May	1½–2	flesh	loam and leaf mould	division	
<i>P. pilosa</i>	May and June	1	pink	peat and loam	division	

	MONTHS OF FLOWERING.	HEIGHT IN FEET.	COLOUR OF FLOWER.	SOIL.	PROPAGATION.	
<i>Physalis Alkekengi</i>	June and July	2	red fruit	sandy loam	seed	
<i>Potentilla rupestris</i>	May to September	1	white	loam and grit or gravel	division	
<i>P. splendens</i>	May to July	1½	white	loam and gravel	division	
<i>P. atrorubra</i>	June to September	2-2½	crimson	loam	division	
<i>P. formosa</i>	June and July	2	purplish crimson	loam	division	
<i>P. fragrans</i>	May and June	½	white	loam	division	
<i>P. Prunella cortusoides</i>	May to July	1	pale purplish rose	loam and grit	seed and division	Slight shade.
<i>P. acaulis</i> (vulgaris)	March to May	½	primrose	loam and grit	division	
<i>P. acaulis</i> var. double lilac .....	..	..	..	..	..
<i>P. acaulis</i> var. double purple .....	..	..	..	..	..
<i>P. acaulis</i> var. dbl. dk. crimson .....	..	..	..	..	..
<i>P. acaulis</i> var. double sulphur .....	..	..	..	..	..
<i>P. acaulis</i> var. double white .....	..	..	..	..	..
<i>P. auricula</i> var.	April and May	1-1½	various	rich loam	division	
<i>Polemonium coeruleum</i>	June	2	blue	loam	seed and division	
<i>P. oxaleum album</i>	June	2	white	loam	seed and division	
<i>P. oxaleum variegatum</i>	June	1-1½	variegated foliage	loam	division	
<i>Pulmonaria angustifolia</i>	April and May	1-1	violet	sandy loam and leaf mould	division	Slightly shaded situation.
<i>P. angustifolia rubra</i>	May	1-1	purplish red	..	division	
<i>P. grandiflora</i>	May and June	1	pink	..	division	
<i>P. mollis</i>	April and May	1-1	blue	..	division	
<i>P. albica</i>	May and June	1	purple	..	..
<i>P. virginica</i>	April and May	1½	blue	..	..
<i>Pyrethrum</i> , named yard	May to October	1-2	various	rich loam	cuttings and seed	
<i>Ranunculus acris</i>	May and June	1	double white	rich loam	division	Moist soil.
<i>R. acris flore pleno</i>	June and July	2	double yellow	loam	division	
<i>R. parnassifolius</i>	June and July	1	white	loam	division	
<i>Rudbeckia Newmanni</i>	June and July	1½-2	yellow	peat and sandy loam	division	
<i>Salvia nemorosa</i>	June to September	1-2	blue	sandy loam	division	
<i>S. pratensis</i>	June to October	3-4	violet	sandy loam	division	
<i>S. argentea</i>	July	1-2	silvery foliage	sandy loam	division	
<i>Saponaria ocymoides</i>	May to August	1	pink	loam & gravel or sand	seed	
<i>S. officinalis plena</i>	July to October	2	pink	loam	division	
<i>Saxifraga crassifolia</i>	April and May	1	rose	loam	division	
<i>S. pyramidalis</i>	June	2	white	loam	division	
<i>Scabiosa graminifolia</i>	June	1-1½	blue	loam and limestone	seed and division	
<i>S. caucasicus</i>	June to September	2	pale blue	..	seed and division	
<i>Scutellaria nigeranth</i>	July to September	1-1	blue	peat and loam	division	
<i>Silene alpestris</i>	May to July	1	white	loam and grit	division	Soil well drained.
<i>S. Schaff</i>	June to September	1	rosy pink	..	seed and division	
<i>Sisyrinchium anceps</i>	June and July	1	blue	sandy loam	division	
<i>S. striatum</i>	April to September	2	yellow	..	division	
<i>S. grandiflorum</i>	May and June	1	purple	..	division	
<i>Solidago virgaurea</i>	July to September	2	yellow	loam and grit	division	
<i>Spiraea filipendula plena</i>	June to September	1½-2	double white	loam	division	
<i>S. venusta</i>	July and August	3	rose	loam	division	
<i>Statice latifolia</i>	May and July	1	blue	sandy loam	division	
<i>S. Gmelini</i>	June to August	1	blue	..	..
<i>S. tatarica</i>	June	1½	pink	..	..
<i>Stokesia cyanea</i>	July and August	2	blue	loam	cuttings	Warm situation.
<i>Stenactis speciosa</i>	July to October	2	purple	loam	division	
<i>Stipa pennata</i>	July and August	2	Grass	loam	seed and division	Moist soil.
<i>Thalictrum glaucum</i>	May and July	5	yellow	loam, peat, and grit	division	
<i>T. aquilegifolium plenum</i>	May to July	3	double white	..	..
<i>T. purpurascens</i>	May to July	3	purple	..	..
<i>Tradescantia virginica</i>	May to October	1½	blue	sandy loam	division	
<i>T. virginica alba</i>	May to October	1½	white	..	..
<i>T. virginica rubra</i> .....	..	..	red	..	..
<i>Tritoma Burchelli</i>	August & September	2-3	red and yellow	rich loam	division	
<i>T. uvaria</i>	August to October	3	orange	..	..
<i>T. uvaria glaucescens</i> .....	..	..	orange scarlet & yellow	..	..
<i>Trollius asiaticus</i>	May and June	1	orange	loam	division	Slight shade.
<i>T. europæus</i>	May and June	1½-2	yellow	loam	..	
<i>T. europæus albus</i> .....	..	..	whitish	..	..
<i>T. napellifolius</i> .....	..	..	deep yellow	..	..
<i>Tassilago fragrans</i>	March	1	white	loam and grit	division	Moist soil.
<i>T. farfara variegata</i>	April	1	yellow	..	..
<i>Valeriana rubra</i>	July to September	1½-2	red	loam	division	
<i>Verbascum phoeniceum</i>	July and August	2½-3	purple	loam and gravel	seed and division	
<i>Veratrum album</i>	June to August	4-5	white	loam	division	
<i>V. viride</i>	July and August	4-5	green	..	..
<i>V. nigrum</i>	June and July	3	dark purple	..	..
<i>Veronica gentianoides</i>	May and June	2	blue	loam and grit	division	
<i>V. incana</i>	July to September	2	blue	..	..
<i>V. incana rubra</i>	July to September	2	red	loam and grit	division	
<i>V. incana alba</i> .....	..	..	white	..	..
<i>V. taurica</i>	June and July	1	blue	..	..
<i>V. longifolia</i>	July to September	3	blue	..	..
<i>V. paniculata</i>	June and July	1½	rose	..	..
<i>V. tomentosum</i>	June to August	2	light blue	..	..
<i>V. argentea</i>	June and July	1-1½	pink	loam and leaf mould	seed	
<i>V. pyrenæica</i>	May to July	1½	yellow	..	seed	
<i>V. villosa</i>	June and July	2-3	white and purple	..	seed	
<i>V. herbacea</i>	June to July	1½	blue	loam and leaf mould	cuttings and division	Partial shade.
<i>V. major</i> vars.	May and June	1	blue and various	..	..
<i>V. minor</i> vars. .....	..	1	..	..	..
<i>Viola altaica</i>	April and May	1	violet	sandy loam and leaf mould	division	Slight shade.
<i>V. arborea</i> .....	..	1-1	violet	..	..
<i>V. arborea alba</i> .....	..	..	white	..	..
<i>V. odorata plena</i>	April to June	1	double blue	..	..
<i>V. odorata var. alba plena</i> .....	..	..	double white	..	..
<i>V. odorata neapolitana plena</i> .....	..	..	sky blue	..	..
<i>V. cornuta</i>	May to October	1-1	blue	..	..
<i>V. palmata</i>	May and June	1	purple	..	..
<i>V. pinnata</i> .....	..	1	violet	..	..
<i>V. cucullata</i>	May to July	1	blue	..	..
<i>V. suavis</i> (Russian)	April to June	1	blue	..	..
<i>V. pennsylvanica</i>	May and June	1	blue	..	..
<i>V. hirta</i>	April and May	1	blue	chalky soil	..	
<i>V. striata</i>	June	1	blue and white	loam	..	

ROYAL HORTICULTURAL SOCIETY'S EXHIBITION AT BURY ST. EDMUNDS.—JULY 16.

ABOUT five years have elapsed since we recommended the Horticultural Society to follow the example of its younger relative the Agricultural, and hold country meetings, changing the locality annually. At length the Society has entered on that course, and we think the result is such that the course will be pursued in future years; for, beyond all doubt, the Exhibition at Bury St. Edmunds, now open, comprises one of the finest aggregates of fruits and flowers ever brought together in England, and affords the most unmistakeable evidence of the skill, judgment, and good taste of British gardeners.

The extent of the Show may be estimated from the fact that the fruit tent is 300 feet long and 30 feet wide; the Pelargonium tent, 175 by 33; the three circular tents for miscellaneous collections, 90, 40, and 30 feet in diameter respectively; and the implement tent is 100 feet by 35.

All the collections are arranged effectively, and leave nothing to be desired except that they could have been placed on turved terraces, for that would have shown their great excellence to still more advantage.

We will accept as a good omen that this first Exhibition is held within the vineyard of Bury Abbey—that Abbey's annual revenues amounted to £200,000; and we will hope that the soil is promotive of good incomes to associated bodies lay as well as ecclesiastical. At all events, if the spirits of abbots revisit the precincts of their earthly dwellings, those of this Abbey must be round and about the displays of luscious, toothsome fruits now gathered together within their ancient vineyard. For there were more Friar Tucks among them than that one immortalised in "Ivanhoe." "It was not the hood that made the monk;" and as we passed through this Abbey's gateway we recalled to memory the tales of festal doings, when plumed knights and bediced ladies had passed beneath its portcullis some four centuries previously, and caroused with their cowed entertainers.

Jolly fellows were those Benedictine Monks of Bury. Two and twenty cooks were found daily employment by them—cooks whose names are recorded—Soyers of their day—such were Brodhaye, Bigot, and Cowe. And what a bill of fare must have been theirs! for, among other outlays we find £10—equal to one hundred now—disbursed weekly on flesh, fish, and cheese; 30s. on Beans; 6s. 8d. on honey; 13s. 4d. on nuts; 12s. 11d. on poultry, though the price of one fowl was then only a penny!

Good eating was never divorced from good drinking; and though among the officers of the Abbey was a "Keeper of the Waters," yet his was a sinecure compared with the office of that brother who was "Squire of the Cellar," for even his official title was thus dignified. In the refectory, on the four principal days of each week, "four score and eight sextarii of mead or wine" were drunk—equal to more than one hundred bottles of modern measure; and besides that, each official had a weekly allowance, and kept it probably in his cell for his "stomach's sake."

"These cellarers," says Fuller, "were brave blades, much affecting secular gallantry;" and a still older authority, who well knew what power they possessed as the bursars of the monasteries, warns that they should not "be wine-bibbers, not proud, not dull, not prodigal, but faithfully distributing the allowances," for all the provisions, cooks, &c., were under their supervision; and they even held a court of justice, where, to use a drinking phrase of the time, they "took down a peg" offenders brought before them.

Prominent among the disputes were the perquisites of the officials; and we must remark upon one—the swineherd, who was entitled to have their dung, and which, with more delicacy than has influenced us, was mentioned as "*fructus de caudâ*."

But we have reached the Abbey vineyard, one of the many known to have been attached to the monastic establishments of England, as at Abingdon, Gloucester, Rochester—"a newly planted" one in the time of Edward the Confessor at Hantun, belonging to the monastery at Evesham—Glastonbury, Michelney, and others in Somersetshire—Thorney, Cambridgeshire. In 1140 the tithes of the Vines of Lyncomb were confirmed to Bath Monastery. In 1076 the priory of Belvoir in Lincolnshire was endowed by its founder with the tithes of all his vineyards; and in 1136 the Abbey of Walden, Essex, was endowed with a vineyard.

Nor were these mere orchards, as some have persisted in asserting; for we read of Edward II. receiving the wine and

Grapes from a vineyard at Halling in Kent, and we have the expenses attendant upon the cultivation of a vineyard belonging to the monks of Canterbury. The Abbot, Ralph Bourne, planted it in some year between 1309 and 1334. The account stands thus:—

"OUTLAY ON THE VINEYARDS.

	s.	d.
The stipend of the Vine-dresser per annum	52	0
Paid for digging in the same for the whole year	43	1
Trellises bought for the same, with carriage	33	11
Spades, hoes, and other implements for the same	52	0 ⁹

Then follows a similar account for another vineyard.

The vineyard of Bury Abbey, then, is a fitting as well as convenient locality for our national Society's Exhibition, and to this we will now pass on.

Of stove and greenhouse plants, which are chiefly shown in the large circular tent, there are several splendid collections; that from Mrs. Cole & Sons, Withington, Manchester, which takes the first prize in Class 1, for nine, is especially remarkable. It consists of a splendid specimen *Ixora coccinea*, *Bougainvillea glabra*, a very large finely-bloomed *Erica ebbata*, *Allamanda cathartica*, the large-flowered *Allamanda Hendersonii*, *Kalosanthes Madame Celeste* Winans, with a crowd of rose-coloured heads of bloom, *Dipladenia crassinoda*, *Erica Jacksonii*, and a good specimen of *E. gemmifera elegans*.

The county cnp for the best stove or greenhouse plant in flower, is taken by the same exhibitors with a most beautifully bloomed specimen of *Dipladenia amabilis*, covered with bright rosy crimson flowers upwards of 4½ inches in diameter.

The Royal Horticultural Society's cnp for the best and most effective group of ten fine-foliaged and ten flowering plants was awarded to Messrs. Lee, of Hammersmith, who exhibit a fine specimen of *Pandanus elegantissimus*, *Gleichenia semivestita* with beautiful bright green fronds, *Cordylina indivisa*, *Latania rubra*, *Cycas revoluta*, a fine *Theophrasta imperialis*, *Dion edule*, and a handsome thick-trunked *Dicksonia antarctica*. Among the flowering plants completing this collection are *Ixora coccinea*, with very fine heads; a large specimen of *I. javanica*, covered with a profusion of orange heads of bloom; the showy *Kalosanthes coccinea*, *Stephanotis floribunda*, *Allamanda Hendersonii*, fine; *Dipladenia splendens*, and *Erica Parmentieri rosea*, densely covered with bloom. Mr. Baines, gardener to H. Micholls, Esq., Bowdon, is second with *Theophrasta imperialis*, a magnificent specimen of *Gleichenia splendens*, *Alocasia Lowii* with noble foliage, an excellent *Cordylina indivisa*, *Rhipsalis coccovandense*, *Dicksonia antarctica* with a thick trunk, *Croton variegatum*, a fine specimen of *Gleichenia flabellata*, a wonderfully fine painful of *Sarracenia purpurea*, upwards of a yard in diameter, with pitchers of the largest size; and *Sarracenia flava*, also remarkably fine, having pitchers about 2½ feet long. Among plants in flower from the same exhibitor are a large specimen of *Clerodendron Balfourii*, forming a mass of white and scarlet blossom; a very large and fine specimen of *Erica ebbata*, *Genetilis tulipifera*, also very large and fine; *Dipladenia amabilis*, rich in colour, but not equal to the plant shown by Cole & Sons; *Allamanda Hendersonii*, with numerous immense yellow flowers, and *A. cathartica*, very fine.

In Class 2, for the best six Stove and Greenhouse plants, Mr. W. Green, gardener to Mrs. Honeywood, Mark's Hill, Kelvedon, who takes the first prize, has the deep blue-flowered *Sollya linearis* in excellent condition, a very good specimen of *Clerodendron Balfourii*, and *Dipladenia amabilis* with several very large flowers.

In Class 3, for the best twelve fine-foliaged and variegated plants, the first prize is taken by Mr. W. Nichol, gardener to T. H. Powell, Esq., Drinkstone Park, Bury, with large specimens of *Caladium bicolor splendens*, *Wightii*, and *Chautini*, *Maranta zehrina*, *Alocasia macrorrhiza variegata*, *Chamarops excelsa*, *Spharogyne latifolia*, and *Maranta regalis*. Mr. Southgate, gardener to R. J. Pettward, Esq., Stowmarket, who is second, has good examples of *Maranta eximia*, *Cissus discolor*, fine *Caladiums*, *Maranta zehrina*, and *Anthurium cordifolium*. Mr. W. Green, gardener to Mrs. Honeywood, who is third, has a large specimen of *Colens Verschaffeltii*, a good *Alocasia metallicum*, *Alocasia macrorrhiza variegata*, and good *Caladiums*. Mr. D. T. Fish, gardener to Lady Cullum, Hardwicke, is fourth.

Class 4 is for the best six fine-foliaged plants, and in this Mr. Baines, who is first, exhibits a very fine example of *Venus's Fly-trap* (*Dionaea muscipula*), beautiful *Anectochilus*, of which *intermedia* and *Lowii* are especially remarkable, and *Spharogyne latifolia* not large but with its ample foliage in a beautifully fresh condition. Mr. D. T. Fish is second, and exhibits *Solanum atropurpureum*, with very rich and handsome foliage, a plant seldom seen in collections of this kind, *Cissus discolor*, a good *Colens Verschaffeltii*, and *Anthurium magnificum* or *cordifolium*.

For the best nine fine-foliaged plants Messrs. Lee, of Hammersmith, are first with a collection in which *Croton variegatum*, *Anthurium acule*, fine; *Theophrasta imperialis*, very luxuriant; variegated Japanese Bamboo, and *Yucca quadriceolar* are the most conspicuous.

For Orchids, the only prize awarded was to Messrs. Lee, who are first for six; and the same well-known firm take a first prize for Palms, amongst which are the noble-leaved *Stephensonia grandiflora*, *Areca crinita* and *Verschaffeltii*, and *Geonoma magnifica*.

Fuchsias are remarkable for the superb condition in which they are

exhibited both as regards size and profusion of bloom. Those from Mr. D. T. Fish, which take the county cup, are especially so; and Mr. W. Smith, gardener to J. S. Crabb, Esq., Great Baddow, has *Souvenir de Chiswick*, *Pauline*, *Conspicua*, and *Rosa de Castille* in fine bloom. In Mr. D. Fish's first-prize six, *Landseer*, *Sir C. Campbell*, *Minnie*, and *Rosa de Castille* are beautifully grown and flowered. His three standards, which receive the first prize in a class for that number, have very large and regular heads, from which hang suspended innumerable large blooms. That fine dark variety, *Sir Colin Campbell*, is particularly good. Mr. Smith, gardener to J. S. Crabb, Esq., Great Baddow; Mr. Fisher, Westley Hall, Bury; and Mr. Foreman, gardener to the Rev. F. Cheere, Igham Rectory, Bury, also take prizes for well-bloomed plants.

Of Show and French *Pelargoniums*, Mr. D. T. Fish, who takes the first prize for six, as well as the first prize offered by the Rev. F. Cheere, for twelve, sends a magnificent specimen of *Rosa Celestial*, as well as fine examples of *Beadsman*, *Bracelet*, *Napoleon III.*, *Elegantissima*, *Crimson King*, *Lilacina*, and others. Mr. Foreman, gardener to the Rev. F. Cheere, takes the second prize offered by that gentleman, also the second prize for six, with, among others, *Governor General*, splendid in colour.

For six Fancy kinds, Mr. Fish and Mr. Foreman are respectively first and second.

Of *Scarlet*, *Nosegay*, and *Variegated Pelargoniums* there is a singularly rich, beautiful, and interesting exhibition, upon which, however, along with some other subjects, we must defer our remarks till next week, merely appending to this report a list of the prizes awarded.

The best six *Dracenas* and *Cordylines* come from Messrs. Lee, of Hammersmith, who have good examples of *Cordylone indivisa*, *Dracena draco*, *indivisa*, *elegantissima*, *heliconifolia*, and *marginata*. Messrs. Lee also have the prize for the best nine exotic Ferns, among which are fine healthy specimens of *Cyathea dealbata*, *C. Smithii*, *Alsophila australis*, *Lomaria nuda*, and *Dicksonia antarctica*. Mr. Jabez J. Chater, Gonville Nursery, Cambridge, is second, and Mr. J. Gilbert, St. Margaret's Street, Ipswich, third. In the Amateurs' class Mr. Allan, gardener to Sir C. Bunbury, Mr. Fish, Mr. Squibbs, and Mr. Foreman take the prizes. For the best Tree Fern Mr. Gilbert is first; Mr. Chater, second; Mr. Harrison, gardener to W. H. Penrose, Esq., third; and Mr. D. T. Fish, fourth. Of British Ferns, a collection containing *Trichomanes radicans*, *Scopolopendrium crispum*, the *Crested Male Fern*, and other good kinds in excellent condition, contributed by Mr. Chater, is first, Mr. Gilbert being second, and Mr. D. Fish third.

The town of Bury enp for the best twelve Ferns is awarded to Mr. W. Nichol, Drinkstone Park, Bury, for neat specimens of *Adiantum cuneatum*, *Gymnogramma Lanchana*, *Adiantum cinnamum*, *Gymnogramma chrysophylla*, *Nephrodium corymbiferum*, *Drynaria angustifolia*, *Lomaria gibba*, *Blechnum corcovadense*, *Platycaum alciorne*. Mr. D. T. Fish exhibits *Davallia latifolia*, *Adiantum tenerum*, *Adiantum trapeziforme*, and others. The town of Bury silver enp for the best twelve *Lycopods* goes to Mr. D. T. Fish for a magnificent specimen of *S. esenia arborea*, standing nearly 7 feet high; *S. Danieliana*, *S. stolonifera*, beautiful; *S. atrovirens*, very beautiful; and *S. esenia*: these are grown on pyramids of peat, and thus form objects of great beauty.

The Suffolk Gardeners' enp, given in honour of the late Mr. Donald Beaton, who did so much through the pages of this Journal in introducing the modern system of bedding out, and which was offered for the best collection of bedding plants, was awarded to Mr. P. Grieve, gardener to E. R. Benyon, Esq., Culford Hall, for a beautiful and very carefully arranged exhibition, comprising most of the best bedding plants at present in use. Mr. Chater, Mr. R. Pettitt, and Mr. Borrie have also very effective exhibitions.

Boquets and table decorations are numerous shown; some of the former are very tasteful, the latter do not present much novelty. In that from Mr. Robins, gardener to Sir E. Kerrison, Bart., Oakley Park, Eyo, which takes the town of Bury enp for the best three groups of fruit and flowers for dinner-table decoration, the variegated *Saxifraga japonica* is introduced as the centre of the two side-dishes, and these are edged with *Tricolor Pelargonium* leaves, and the flower-heads of an *Agrostis*. The stem of the centre piece is entwined with *Cissus discolor*.

Among miscellaneous subjects, Mr. Buckle, gardener to Lord Walsingham, Merton Hall, Bedford, shows immense stems of *Lilium giganteum*, grown in the open air, nearly 10 feet high, and bearing several enormous flowers; and from G. W. Wilson, Esq., comes a fine bloom of *Lilium auratum*. Mr. Baines, whose *Sarracenia*s have already been noticed, likewise shows a miscellaneous collection, in which there is *S. Drummondii alba* in flower, and the curiously marked *S. varioralis*. Lastly, Messrs. Veitch & Sons have the beautiful *Maranta Veitchii*, *Abutilon Thompsoni*, with yellow marbled foliage; the handsome *Begonia Pearcei*, that noble *Palm Verschaffeltia splendens*, *Sanchezia nobilis variegata*—one of the best ornamental-foliaged plants introduced of late years; *Acalypha tricolor*, *Colens Veitchii*, *Variegated New Zealand Flax*, *Nierembergia rivularis*, *Nepenthes Rafflesii*, with numerous pitchers; *Panienum variegatum*, beautifully striped with white, green, and red; the new *Crotons*, which recently received certificates at Kensington; a very large specimen of *Leptopteris superba*, *Echites rubro-venosa*, with leaves splendidly veined with brilliant red; *Anthurium Scherzerianum*, and a number

of plants of *Lilium auratum*, which perfume the air of the whole tent in which they are placed.

Annexed are the prizes in the classes not specially noticed above:—

Town of Bury.—A watch or cap, for the best three window plants grown by a mechanic or labourer, Mr. Arthur Tooley, Bury.

Town of Bury.—Silver enp, for the best three groups of fruits and flowers for the decoration of the dinner-table, Mr. Robins, gardener to Sir E. Kerrison.

The Borough Members for Bury.—Silver enp, for the best hand bouquet for ladies, Mr. John Delamere, Cheshire. Second ditto, Mr. B. R. Cant, Colchester. Third ditto, Mr. Robins. These prizes were awarded by a jury of ladies.

Eyo Horticultural Society.—Silver enp, for the best twenty-four cut roses on single stems, grown by an amateur, a member of any horticultural society in the county of Suffolk, Mr. Thomas R. Francis, Mendlesham.

Woodbridge Horticultural Society.—Silver enp, for the best twelve cut blooms of *Picotees*, grown by an amateur, Mr. S. E. Buttrum, Bury.

Suffolk Gardeners' Silver Cup.—For the best twelve cut roses grown by a Suffolk gardener, Mr. W. Nichol, gardener to J. H. Powell, Esq., Drinkstone Park. Second ditto, Mr. R. Keene, gardener.

County Silver Cup, for the best twelve seedling Variegated *Pelargoniums* of 1866 and 1867, Mr. P. Grieve.

Best six *Petunias*, double-flowered varieties, distinct (open).—First, not sufficient merit. Second, Mr. H. Foreman. Third, Mr. P. Grieve.

Best six *Petunias*, single-flowered varieties, distinct (open).—First, Mr. J. Barrett, Bury. Second, Mr. W. Smith.

Best twenty Succulents, of distinct kinds (open).—Prize, Mr. R. Pettitt, Bury.

Best twelve *Carnations* and *Picotees*, cut blooms.—First, Mr. C. Turner, Slough. Second, Mr. John Hines, Ipswich. Third, Mr. S. C. Buttrum.

Best twelve varieties of Zonal *Pelargoniums*, in bunches of cut flowers, five trusses in each bunch.—First, Mr. R. Moore, Wetheringsett. Second, Mr. J. Barrett, Bury. Third, Messrs. Wood & Ingram, Hunts. Fourth, Mr. S. Brown, Sudbury.

Best twelve varieties of *Verbena*, in bunches of cut flowers, five trusses in each bunch.—First, Mr. C. O. Fison, Stowmarket. Second, Mr. J. Barrett. Third, Mr. E. C. Prentice, Stowmarket.

Best forty-eight cut Roses, distinct, one truss of each (Nurserymen).—First, Mr. R. B. Cant, Colchester. Second, Messrs. Lee. Third, Mr. J. W. Ewing, Norwich. Fourth, Messrs. Wood & Togram.

Best forty-eight cut Roses, distinct, one truss of each (Amateurs).—First, Mr. J. T. Hedge, Colchester. Second, Mr. H. Brooke, Wetheringsett.

Best twenty-four cut Roses, distinct, one truss of each (Amateurs).—First, Mr. W. Ingle. Second, Mr. R. E. Postans, Brentwood. Third, Mr. R. Keene. Fourth, Mr. J. T. Hedge.

Best miscellaneous collection of cut Roses (open).—First, Mr. B. R. Cant. Second, Messrs. Lee. Third, Mr. J. Hedge.

Best twenty-four hardy herbaceous cut flowers, distinct.—First, Mr. J. Gilbert. Second, Mr. J. T. Hedge. Third, Mr. J. J. Chater.

Extra prizes.—Mr. S. Brown, Sudbury (*Gladiolus*), and Mr. E. Sorrell, Chelmsford (Cut flowers).

Best Pinks, twelve cut blooms, distinct.—First, Mr. J. Hines, Ipswich. Second, Messrs. Nun & Hobday, Norwich. Third, Mr. H. Hooper.

Best twelve *Scarlet Pelargoniums*, distinct kinds, of any shade or colour, Zonal or plain-leaved, but not variegated (Amateurs).—First, Mr. Foreman. Second, Mr. D. T. Fish. Third, Mr. P. Grieve.

Best twelve *Scarlet Pelargoniums*, distinct kinds, of any shade or colour, Zonal or plain-leaved, but not variegated (Nurserymen).—First, Mr. J. Barrett, Bury. Second, Mr. J. J. Chater. Third, Mr. J. Mann, Brentwood.

Best twelve *Nosegay*, or Hybrid *Nosegay Pelargoniums*, distinct varieties, in flower (open).—First, Mr. J. Barrett, Bury. Second, Mr. D. T. Fish. Third, Mr. H. Foreman. Fourth, Messrs. Nun & Hobday, Norwich.

Best six *Scarlet Pelargoniums*, including *Nosegays*, but not variegated, distinct kinds (Amateurs).—First, Mr. H. Foreman. Second, Mr. P. Grieve, Culford Hall, Bury. Third, Mr. A. Fisher.

Best six Variegated *Pelargoniums*, including *Nosegays*, distinct kinds (open).—First, Messrs. Saltmarsh & Son, Chelmsford. Second, Mr. Foreman. Third, Mr. P. Grieve.

Best six new Variegated *Pelargoniums* (open).—First, Messrs. Saltmarsh & Son. Second, Mr. Grieve. Third, Mr. J. Mann.

Best six *Achimenes*, distinct kinds (open).—First, Sir C. Bunbury, Bart., Bury St. Edmunds. Second, Mr. W. Smith. Third, Mr. A. Fisher. Fourth, Mr. Foreman.

Best six *Gloxinias*, distinct kinds (open).—First, Rev. F. Cheere. Second, Sir C. Bunbury. Third, J. G. Sheppard, Esq. Fourth, Mr. D. T. Fish.

FRUIT AND VEGETABLES.

There is altogether an extensive display of fruit, although in some of the classes the exhibitors are not so numerous as could be desired.

In Pine Apples the county cup for the best three fruit of different kinds is taken by Mr. J. Barnes, of Bicton, with a large and handsome fruit of *Bicton Queen*, *Globe*, and *Russian Globe*. For a single Pine Apple of any variety Mr. Ward, gardener to T. N. Miller, Esq., Bishop Stortford, is first with a Queen of 5 lbs. 6 ozs., kept, however, rather too long. Mr. Barnes is second with *Charlotte Rothschild*, not very large for that variety, and having a large crown. Mr. Green, gardener to Mrs. Honeywood, is third with a small well-ripened Queen.

Among Black Grapes, single dishes, Mr. Squibbs, gardener to the Marquis of Bristol, Ickworth Park, Bury, is first with good well-coloured bunches of *Black Hamburg*; Mr. Sage, Ashridge, is second with beautifully coloured bunches of *Black Hamburg*; and Mr. G. L. Rushmore, Tendring Hall, Stoke, third, for large somewhat loose bunches of *Black Hamburg*, not quite so fully coloured as desirable, but still very good. Mr. Carmichael, gardener to H. R. H. the Prince of Wales, Sandringham, has an extra prize for large bunches of the same kind; and Mr. Pottle, gardener to B. Colvin, Esq., exhibits *Muscad Hamburg*.

In single dishes of White Grapes the first prize is taken by Messrs. Lane, of Great Berkhamstead, with excellent, well-ripened bunches

of Buckland Sweetwater. Mr. Pottle is second with compact bunches of the same kind; and Mr. Squibbs third with Chasselas Musqué. Large bunches of Muscat of Alexandria come from Mr. Grix, gardener to E. W. Harlock, Esq., Ely, but very unripe.

In Peaches, single dishes, Mr. Sage, Ashridge, is first with Royal George, very large and finely ripened; Mr. Perkins, gardener to Lord Henniker, Thornham Hall, is second with Grosse Mignonne, very well ripened; and Mr. Robins, Oakley Park, Eye, third with good fruit of a kind unnamed, but apparently Barrington.

Of Nectarines, the display is small. Mr. Sage is first with Elruge, very fine; Mr. Carmichael second with Violette Hâtive, very good and finely coloured; and Mr. Rushmore third with the same kind.

Figs only consist of Brown Turkey and Marseilles, the former finely ripened, from Mr. Squibbs, being first, the latter, respectively from Mr. Sheppard, gardener to John Berners, Esq., Wolverstone Park, Ipswich, and Mr. Rushmore, being second and third.

Cherries consist of Bigarreau, Elton, Belle de Choisy, May Duke, and Black Tartarian. Mr. D. T. Fish, Hardwicke Hall and Mr. Sage have very fine Elton and Bigarreau, but are disqualified in point of number, too many being shown. Mr. Green, gardener to Mrs. Honeywood, is first with Black Heart, very fine. Mr. Salvage, gardener to Capt. Bennett, Rogham Hall, Bury, is second with May Duke; and Mr. Pottle, third, with the same kind.

Of Strawberries, the best four dishes came from Mr. Squibbs, and consist of Sir C. Napier, British Queen, Eleanor, and Frogmore Late Pine. Mr. D. Irving, gardener to the Duke of Hamilton, Easton Park, is second with British Queen, Frogmore Late Pine, Sir C. Napier, and Myatt's Surprise.

Of single dishes, the best is Admiral Dundas, fine, from Mr. George Foreman, Bretenham Park, Bicester. Empress Eugénie, from Mr. Squibbs, is second, and Mr. Barratt, Cotton Lane Nursery, Bury, is third with Eleanor.

Melons on tasting were found to be generally of excellent flavour. Green-fleshed kinds consist of Orion, Dr. Hogg, Bromham Hall, Victory of Bath, and The Sultan. The last, shown by Mr. Webb, Culham House, Reading, was found to be of remarkably fine flavour, and was awarded the first prize. Bromham Hall, from Mr. Robins, Oakley Park, is second; and Mr. Earley, gardener to F. Pryor, Esq., Digswell, is third with Dr. Hogg. Scarlet-fleshed kinds consist of Merton Hall, Outlen Park, Queen Victoria, and Scarlet Gem. Mr. D. T. Fish, gardener to Lady Cullum, is first with Merton Hall; Mr. Stannard, gardener to H. R. Hofmayr, Esq., Newmarket, is second with Scarlet Gem; Mr. Perkins, Thornham, third with the same kind.

Of Plums, the best dish is Washington, from Messrs. Lane, Great Berkhamstead. Mr. Grix is second with Rivers's Early Prolific. The third prize was withheld by the Judges.

Among miscellaneous fruit there is a collection of eight kinds of Grapes from Messrs. Lane, of Berkhamstead, in which there are large bunches of Chavoush and Foster's White Seedling. Mr. Ewing, Elton Nursery, Norwich, has twenty-six dishes of Gooseberries, three dishes of Red Currants, and one of Black Naples. Mr. Nichol, gardener to J. H. Powell, Esq., Drinkstone Park, Bury, has fruit of *Passiflora edulis* and *quadrangularis*; and Mr. Salvage Beehive Raspberries very good, Gooseberries, Red and White Currants, and a dish of Apples, name unknown. A first prize is taken by Mr. A. Henderson, gardener to Earl Manvers, with four Thersby Queen Pines in pots with fruit, which promise to be very large and heavy when swelled off, but not being yet ripe, the merits of the variety, which is stated to be a seedling, could not be determined by the Fruit Committee. Messrs. Lane are awarded a first prize, Mr. Ewing, the second, and Mr. Salvage the third.

Mr. Standish, of the Royal Nurseries, Ascot, exhibits a small basketful of his Royal Ascot Grape, a variety raised from Bowood Muscat and Trévère Frontignan, and having large oval jet black berries, covered with a very dense bloom, and borne on short sturdy warted stalks. The flesh is firm, but very juicy, and richly flavoured. For this fine variety, which on this occasion was exhibited in a perfect state of ripeness, a first-class certificate was awarded.

The town of Stewmarket gold medal for the three heaviest bunches of Grapes, is taken by Mr. Meads, gardener to Raikes Currie, Esq., Minley Manor, Farnborough, with the heaviest three bunches of Black Hamburgh which we remember to have seen; the immense centre bunch alone weighs 10 lbs., and the other two, which only cede to it in size, make the total weight 26½ lbs.

The Thetford Horticultural Society's cup for the best six dishes of out-door fruit goes to Mr. J. Sheppard, gardener to J. Berners, Esq., Wolverstone Park, who has fine White and Red Currants, Fastolf Raspberries, Strawberries, May Duke Cherries, and Musch Musch Apriots. Mr. Irving, gardener to the Duke of Hamilton, who also competes, sends fine Black Naples Currants and Citron des Carmes Pear, but not ripe.

The *Gardeners' Chronicle* cup for the best collection of Fruit and Vegetables is taken by Mr. Pottle, gardener to B. D. Colvin, Esq., Little Bealings, Woodbridge, with very good Black Prince Grapes, two large Melons, scarlet and green-fleshed; fine white Dutch Currants, Fastolf Raspberries, and Black Tartarian Cherries. The vegetables are Veitch's Perfection Peas, Sion House Kidney Beans, Globe Artichokes, Johnson's Wonderful Broad Beans, fine; Merriott Scarlet Carrot, White Stone Turnips, and Birmingham Pizetaker Potatoes, with two good Telegraph Cucumbers.

The *Journal of Horticulture* prizes for the best two desserts, consisting of not less than seven kinds of fruits of 1867, arranged as for table, combining quality of fruit with taste in arrangement, and open to gentlemen's gardeners and amateurs only, are taken by Mr. Carmichael, gardener to H.R.H. the Prince of Wales, Sandringham; and Mr. Blair, gardener to Sir G. N. Broke Middleton, Bart., Shrubland Park, Ipswich. Mr. Carmichael's collection consists of nineteen dishes in all, arranged in three rows, the centre being Grapes—namely, beautiful bunches of Black Hamburgh and Foster's White Seedling, on either side of these May Duke Cherries, and a Green-fleshed Melon, then two small but excellent Queen Pines, then two splendid dishes of Nectarines, large and beautifully coloured, finishing with two Providence Pine Apples. Front line, centre an excellent Prickly Cayenne Pine, then two dishes of Stirling Castle Peaches, finishing off at the two corners with two magnificent dishes of Black Hamburgh Grapes, weighing from 3 to 4 lbs. each. Back line, Pines on either side, Foster's White Seedling Grapes, and Black Hamburghs. Corner dishes, Strawberries.

Mr. Blair's exhibition partakes somewhat more of a floral character, and is very tastefully arranged. The fruit is not so fine as in Mr. Carmichael's, but the arrangement is more pleasing and graceful. The three centre pieces are entirely of flowers set in tall, slender-stemmed, glass vases, flanked at the ends with a somewhat lower stand of mixed fruit and flowers, the centre being a small Queen Pine with two bunches each of Black and White Grapes hanging over the edges, and a few Peaches, Nectarines, Cherries, &c., intermixed with some flowers; in front and behind the centre vase are two beautiful Green-fleshed Melons; beautiful dishes of Hunt's Tawny Nectarine, Yellow Gooseberries, and very fine Raspberries, Peaches, Strawberries, Black Heart Cherries, and Green Marseilles Figs complete the exhibition.

Mr. D. T. Fish exhibits eleven dishes, the centre a large standard vase of flowers somewhat stiff in arrangement, the five dishes on either side being respectively filled with Figs, Peaches, White Nectarines, Apples, one dish of Black and White Grapes, Gooseberries, White Currants, White Heart Cherries, Strawberries, and a Melon, each dish having a few flowers intermingled with the fruit.

Lady Caroline Kerrison also exhibits a collection, consisting of Grapes, Peaches, Nectarines, Figs, Jefferson Plums, &c., set in coloured china vases, plates, and images, a few flowers being interspersed, and the whole being set off with a rather ingenious floral band of Ferns, cut flowers of Roses, Pinks, Ferns, &c., laid in a small tin case filled with water, which keeps them fresh.

The Ipswich town cup for the best six pot Vines is awarded to Messrs. Lane & Son for Alicante, Foster's Seedling, Black Hamburgh and other Vines, loaded with fine bunches. The same firm likewise take the town cup for the best twelve orchard-house trees, consisting of Apples, Peaches, and Nectarines, Plums, Pears, Figs, and Cherries in excellent bearing.

The Thetford Horticultural Society's prize for the best eight kinds of vegetables is awarded to Mr. W. Collins, Kolverstone Hall, Thetford, for Kidney Potatoes, Peas, Beans, Kidney Beans, Cauliflowers, Turnips, Carrots, Vegetable Marrows, all of which are very good. The cup offered by the same Society for the best two Melons and the best brace of Cucumbers, goes to Mr. J. Borrie, Easton Hall.

Mr. Robert Fenn, of the Rev. G. W. St. John's, The Rectory, Woodstock, Oxon, sends thirty-seven sorts of Potatoes suitable for forcing, for garden cultivation, and for the farm. Of the earliest of these the tubers of last year's growth as well as of this are exhibited, as in the case of that excellent round kind Hogg's Coldstream. Shutford Seedling (Kidney), and Premier, thus showing their qualities as regards earliness and long keeping. Of second early kinds, suitable for gardens, we noticed Fenn's Onwards (Round), and Rivers's Royal Ashleaf. Of garden sorts, noticeable for sound-keeping, we observed Wheeler's Milky White, Daintree's New Seedling, the old Lapstone Kidney, Hagne's Kidney, and Pebble White. Of Farm kinds there are the old Fluke, British Queen, Gryffe Castle Seedling, White Farmer, and York Regent. Freebearer, though rough in appearance, is very productive, white-fleshed, and excellent in flavour. Of early Potatoes of this season's growth Mr. Fenn has excellent tubers of Early Ten-week, Fenn's Onwards, Daintree's Seedling Round, Rintoul's (?) Early Don, very smooth-skinned, tinged with purple round the eyes, but boiling very white; Edgecot Second Early, Almond's First Early, scarcely distinguishable from Walnut-leaf Kidney, Old Early Ashleaf Kidney and Mona's Pride, also scarcely distinguishable from each other; White-blossomed Ashleaf, good for production in pots and boxes; Fortyfold excellent for mashing. Of most of the above a further account will be found in Vol. XI., page 386. As a new kind, Mr. Fenn exhibits his Rushbrooke Frame, a seedling from the Early Frame and his Russet Seedling Kidney. This kind, we are informed, is remarkable for its extremely dwarf top, and consequent suitability for culture in pots. It appears to be a promising kind for early forcing. Mr. Fenn likewise exhibits, under the title of "garden economics," his system of Vine-training, specimens of home-made Grape and other wines, Grape glasses, and a basket of Rivers's Muscat St. Laurent, a sort which he finds particularly suitable for the back walls of vineries, where it ripens well under the shade of other Vines.

Under the same title Mr. Fenn has also the "Alliance hive, adapted for cottagers," to be worked on the depriving system without destroying the bees, as described in our number for October 28th,

1862; "the Fennian" system of heating, drill hoes, mends, honey in glasses, and wax.

Mr. Fenn has besides French Crab Apples of 1865 and 1866 in excellent preservation.

IMPLEMENTS.

In garden seats in iron Messrs. J. B. Brown, 148, Upper Thames Street, London, were awarded a first-class certificate for a seat with an iron back in imitation of Nasturtium leaves, pretty in design, and for its appearance very cheap.

In the next class, for seats in wood, Messrs. J. B. Brown & Co. also take a first-class certificate for a good, neat, cheap seat on a wrought-iron frame. Mr. Morley, of Ipswich, takes similar awards for wooden and convertible chairs.

For what is called the Bury St. Edmund's Rattan basket a first-class certificate was awarded to Mrs. Garnham, who is a daughter of our old bee authority, Mr. Payne. They are neat, light, and well adapted for suspending in rooms, for holding plants in pots and bouquets.

In cast-iron vases Messrs. J. B. Brown take first-class certificates for the Tazza Vase and the plain-fluted vase, both of good design, very cheap, and suitable for gardens. A similar award was made to Messrs. Sanders, Frewer & Co., for the Leicester flower vase, a handsome cast-iron vase for garden and conservatory decoration.

From Messrs. J. B. Brown there also comes a good exhibition of galvanised wire netting for poultry and game purposes, which is awarded a first-class certificate.

Among mowing machines Messrs. J. B. Brown & Co., 148, Upper Thames Street, take a first-class certificate for their new patent B B 30-inch mowing machine, on account of its cheapness and facility of delivery. Messrs. Brown also exhibit an assortment of mowing machines of various sizes. Messrs. Green, of Leeds, likewise show a number of their efficient mowing machines of various sizes, for which they also take a certificate, likewise one for garden rollers.

In garden engines Mr. R. Read, Regent's Circus, Piccadilly, London, takes a first-class certificate for his well-known continuous-action engine, fitted into a twenty-eight-gallon vessel; and he has a similar award for a hydraulic suction pump, which works well and easily, and keeps up a continuous stream.

Among models of greenhouses, Messrs. Harrison & Bettridge, of Chelmsford, were awarded a first-class certificate for a ventilating apparatus for conservatories and hothouses, which pushes the sashes outwards and firmly fixes them at any required angle, thus affording any desired amount of air. This is effected by means of a handle, cog wheels, and a rod to which is attached a cogged segment and arm fixed to the front sashes. The apparatus can be adapted to both side and top lights, and can be fixed either inside or outside the house. Messrs. Cumming & Edmunds also show a model greenhouse, in which, instead of the ordinary putty-glazing, the glass is made to slide in a groove in the rebates, and is fixed in its place by a small zinc spring at the bottom of each pane. Ventilation is effected by rods lifting the whole of the lights outwards. The same exhibitors also show a number of plans of houses of various forms erected by them. Messrs. Sanders, Frewer, & Co., Victoria Works, Bury St. Edmunds, exhibit several of Beard's patent houses, one being a handsome curvilinear conservatory with the truss-rods so fixed as to be useful for training climbers, another a forcing-pit, two others cheap lean-to's, and a fifth Ingram's Strawberry-house. In these ventilation is effected by a patent screw working a traversing rod with arms attached which open the lights. In the conservatory the lights are opened by a similar rod worked by bevelled wheels and a spindle. There is in addition a span-roofed conservatory with a ventilating ridge. The whole of these houses are glazed on Beard's patent system, as described in the pages of this Journal. First-class certificates were awarded for the mode of glazing without putty, for the mode of ventilation, and for a flower-stage consisting of cast-iron legs on which rest ordinary roofing-slates, forming a cheap and useful as well as inexpensive plant-stage.

Messrs. Harrison & Bettridge, Chelmsford, exhibit Milbank's Self-feeding Boiler, which in form resembles a saddle boiler set on one end, and having a domed top on the upper end. The advantages claimed for it are, that the whole strength of the fire is in contact with the water-surface. The heat circulates beneath the boiler and around its outside under a dome of brickwork. It is fed by a shoot in front to which can be attached a feeder as a prolongation, which it is stated will enable the fire to be kept for twelve hours. In the same class Messrs. Cumming & Edmunds, Lillie Bridge, Richmond Road, Fulham, also take a first-class certificate for their cast-iron tubular-arched saddle-boiler, resembling the letter U inverted, with tubes connecting the top and bottom waterways, between which the fire passes, and around which it is confined by a brick casing following the curve of the arch. The apparatus has been found to prove very efficient with a small consumption of fuel.

EXPERIMENTS WITH POTATOES.

Dr. HEXAMER, of Newcastle, New York, furnishes us with an account of some experiments of his with Potatoes. We should preface the specifications of these results by stating that Dr. Hexamer is an accurate and scientific experimenter and observer, and a good farmer.

1. Out of seventy hills of Potatoes, peeled so that no eyes were visible, thirty-five grew. Some produced very large Potatoes. The planted Potatoes remained, mostly, hard and firm till digging time.

2. Out of eighty hills, pieces cut without eyes, thirteen hills grew. All these sprouted on the cut surface, none through the skin. (One large Potato, cut in two lengthwise, sprouted on the cut side near, but below the skin, and there was no sprout proceeding from a visible eye.)

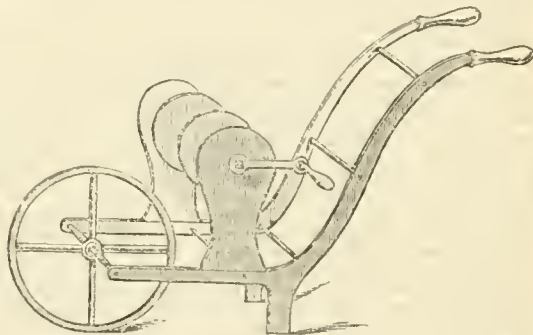
3. Out of one hundred whole Potatoes, ninety-eight grew from the small end, and two at the side. With more than half the number of Potatoes planted whole, only one eye grew, the rest remaining dormant.

4. A Potato does not always expend all germinating power in one year.

5. Wet rot and dry rot are one and the same disease. Potatoes affected with the rot, will rot dry when they are kept dry, and the same will rot wet when they are kept in a moist place.—(*American Agriculturist*.)

CARRIAGED REEL FOR WATERING-HOSE.

I SEND a sketch of an ingenious machine for winding-up hose for watering gardens. It is of very light construction, being made of iron, and at a cost of about £1 5s.; all other reels that I have seen are much more expensive and do not answer the purpose so well.



There is a small catch attached to the carriage to prevent the reel unwinding and to keep the hose firm on the reel. The invention is by a man residing in this town. If you should think proper to notice it, he would consider himself repaid by any orders he might receive for one or a number.—E. J.

[We have received the sketch from a subscriber. If any one requires further information, they will obtain it probably by writing to "E. J.," 2, Clive Place, Welshpool.]

FIRST WESTERN ROSE SHOW.

WHEN the National Rose Show, the first show of Roses exclusively, was originated in 1858, it was intended to be locomotive, in strict accordance with its name; but so soon as its founders saw how large a majority of the subscribers and exhibitors were located in the sunny south, they decided to fix its home, for a time at all events, in that more genial clime. It was established in London, and has never strayed beyond suburban range. The first show was held in St. James's Hall; the second in Hanover Square; the third in the Crystal Palace; and seven shows in sequence at the gardens of the Royal Horticultural Society, in combination with the special exhibition of Roses held by the Society itself.

There were, however, many earnest supporters of the first Grand National Rose Show, who, though they lived in chillier counties, where the "air bites shrewdly," and "it is very cold," had as warm a love for the royal Rose, as could gladden a zealous heart. They assented at once to the decision of the majority. They loved the Rose too well for envyings and strife. They came long journeys from their Rose-clad homes, and returned jubilant, and yet not quite content. Roses of equal beauty came forth in their own gardens, soon after the southern show, why should these blush unseen? Why should there not be exhibitions at which the midland, eastern, western, and northern Roses should meet in their prime and glory? Hence arose the Birmingham Rose Show, the Stamford Rose Show, the Leicester Rose Show, the Rugby Rose Show, the Liverpool Rose Show, and, on Tuesday, the 9th of July last, the first Western Rose Show, at Hereford. These offshoots from the parent tree have developed or declined with varied fashion, but none have "come up" with more vigour and promise

than this scion, just now so firmly rooted in the rich, rosy soil of Hereford. All honour to the hand which put in the cutting, that of the Rev. C. H. Bulmer, of Credenhill Rectory, Hereford, and to the many coadjutors, who, when it was struck, were eager to tend and train. A bonnier baby was never born, nor one which showed at such an early age a capability to walk alone.

When we reached the Shire Hall, in the early morning of Tuesday, we found it most tastefully prepared for the reception of the Roses. The orchestra and central table were gracefully ornamented with beautiful plants from the nursery at King's Acre, and from the gardens of the neighbouring gentry (specially to be observed, and justly placed in the most conspicuous position, a glorious plant of *Lilium anatum*, having twenty-two flowers on three stems, and from a single bulb), which just prevented the uniformity of the Rose-boxes from being at all monotonous; and a pretty collection of decorative articles for the drawing-room, jewellery, clocks, &c., from which prizetakers might select, if they pleased, was effectively grouped at the upper end of the Hall. Soon the tables began to fill, until they were quite full, with Roses. Ah! sweet Roses. Mr. Cranston, it is known to rosarians, has this year escaped the cruel frosts, and has consequently beaten all England, from first to last—at the Crystal Palace, at Kensington, Birmingham, and elsewhere. And here he was on his own ground, like a king and a conqueror, "happy and glorious." Only a king with a lion heart would dare to cope with him in his own camp, to challenge the Douglas in his own hall, and such a royal champion came, and threw down his gauntlet, boldly as though on his own Salisbury Plain, in the person of brave John Keynes. Well might meener knights stand by with bated breath to see such warriors fight, and, indeed, it was a grand spectacle. The chief victory (for seventy-two varieties) was won by Cranston, but the next battle (for forty-eight) by Keynes, and the engagement generally reflected the highest honour upon the two renowned combatants.

Among amateurs, Mr. Perry, Mr. Arkwright, the Rev. G. Arkwright, Sir Velters Cornwell, the Rev. C. H. Bulmer (the founder of the feast of Roses), Major Heywood, and others, were, considering the severity of the season, and the novelty of the undertaking (some of the exhibitors showing for the first time) most successful, and more experienced competitors, going next year to Hereford, must look to their Laurel wreaths, keeping them tight upon their heads, as a sportsman presses down his hat when he charges some larger leap, lest they be changed for the Cypress of defeat, and their wearers be reduced from officers in "the Boys," to mere privates in "the Blues."

Roses, arranged with Ferns and other foliage, for the decoration of the dinner-table, were a most effective addition to the Show, occupying half of the central table, and exhibiting much graceful taste. Mrs. Berkeley Stanhope took precedence with a very elegant display, and was worthily followed by six other competitors. White tablecloths should be used for these decorations, and will be in future at Hereford.

Designs in vases were well done, especially one, which, shaped like a balloon, was composed of distinct colours, divided by Ferns, and which took the first prize. A basket of Mr. Cranston's glorious Roses took the second honours.

The bouquets of Roses were prettily arranged, but were disqualified by the censors (in accordance with the strict requirement of the schedule, that they must be available for the hand), with the exception of two, sent by Major Heywood, which honourably and handsomely fulfilled the law. Why do our English bouquet-makers always construct their posies as if they were intended for Chang?

The Show was, altogether, charmingly complete, and its merits were heartily appreciated by many hundreds of spectators, who came in crowds to see. Some complained of the heat, and some that they could not see for the press, and all agreed that the first Western Rose Show was *coulcur de rose*, and a grand success.

TESTIMONIAL TO MR. ROBERT THOMPSON.

The allotted time for man's existence on earth is three score years and ten, what then ought we who have received so much horticultural benefit from the practical teaching of a man who has devoted two score of those years entirely to the science and practice of horticulture, do to make the last years of his life glide pleasantly away? Those thoughts have been suggested by the long and faithful services rendered by Mr. Robert Thompson to the Royal Horticultural Society. For forty-three years he has done all that possibly lay in his power for the advancement of horticulture, and for the great services rendered he has been very poorly remunerated. During this time he has brought up a family in the most respectable manner. He is a man possessing a most kindly nature, and one of the most unassuming men I ever met. From the year 1824, up to the present time, Mr. Thompson has been a frequent contributor to the horticultural press. Most of us can even now gain useful information from his well-written articles which appeared in Loudon's "Gardener's Magazine," and the *Gardeners' Chronicle*, from its commencement in 1841. It will be observed by the most casual reader, that these articles were written by a thoroughly practical man. Then, the "Fruit

Catalogue" of the Horticultural Society, may be said to be one of his most creditable works, and his "Gardener's Assistant" may be truly said to be one of the very best works on practical gardening ever written. This book ought to be in the hands of every gardener, and more especially of young gardeners. If they will at once procure this book, which may be had at a very moderate cost, by reading it diligently they may find a never-failing source of information on every subject connected with the garden. This, with perseverance in their daily practice, will soon help them on, and make them if they will, well fitted to fill situations of trust and responsibility.

Mr. Thompson's meteorological reports which have been given so accurately through a long series of years, surely ought to receive some recognition from the Government of this country.

I must again ask the question, What ought we to do to make the last years of such a good and zealous man happy? Undoubtedly we can do a very great deal, what I would suggest is, that all my fellow labourers who are engaged in the wide field of horticulture, should assist in getting up a testimonial to Mr. Thompson. Not long ago a very handsome testimonial was presented to Her Majesty's gardener. As soon as this idea was mooted, there was a hearty response. This testimonial was given not because of any particular service rendered to horticulture generally by Mr. Ingram, but as a recognition of his long and faithful service rendered to the Royal Family. The fact of Mr. Ingram holding his present high position for half a century, would suggest the idea that to him the handsome testimonial was only a superfluity, although very gratifying. With Mr. Thompson the case is very different: he, as I have before stated, has been very poorly remunerated, and has had to bring up a family. I, therefore, hope all will contribute as much as they can afford. By doing this they will show their appreciation for the past labour of a true and faithful man; it will also be an encouragement for young gardeners to make themselves as useful to the purpose of horticulture as they can, and will offer this inducement to them, that their fellow workers will not be unmindful of the service they have rendered, when they become unfit by age to fill the position which has been assigned them. I shall on my part feel a great pleasure in giving a guinea towards a testimonial to Mr. Thompson, and shall use my influence with my assistants to induce them to contribute their mite towards this very desirable object.

I would further suggest that the Editors of all the horticultural Journals should receive contributions, and that the amount subscribed should be invested in some safe stock, which will realise a yearly income to Mr. Thompson for the remainder of his life.

I may state in conclusion, that I have no motive whatever in offering these suggestions, but am only prompted by a sense of justice, for I am scarcely known to Mr. Thompson, more than by name. I, therefore, hope the appeal I now make will be heartily responded to by both head gardeners and their assistants. If the latter will only subscribe a shilling each, their subscription will be a credit to them, and shillings make pounds. If by making this appeal I can bring the desired object to maturity, it will be a source of great pleasure and gratification to me.—J. WILLS.

[Since the above was written by Mr. Wills—and in the whole of his observations we heartily concur—we are informed that a preliminary meeting for raising a fund to be invested for the benefit of, and as a testimonial to Mr. Thompson, was held on the 9th inst., and the following address resolved to be circulated:—

"The retirement of Mr. Robert Thompson from active duty in the service of the Royal Horticultural Society, has been thought by his numerous friends to offer a fitting occasion on which to present him with a substantial Testimonial, expressive of their cordial sympathy with him in his declining years, and indicating also their high appreciation of the many services which he has rendered to Pomology and Meteorology during a long and active life.

"The Council of the Royal Horticultural Society, acting as the exponents of the wishes which have been expressed that Mr. Thompson's services should be publicly recognised in this way, have taken the initiative by inviting several gentlemen connected with horticulture to attend a preliminary meeting, at which a Committee was named to carry out the proposed object. [The Committee consists of the Council of the Royal Horticultural Society, the International Committee, and other gentlemen connected with horticulture and meteorology; the Duke of Buccleuch, President; Mr. W. W. Saunders, Vice-President; and Dr. Hogg and Mr. Thomas Moore, Joint Secretaries.]

"The many services rendered by Mr. Thompson both to Horticultural and Meteorological Science are well known to those actively engaged in these pursuits, but it may be proper on such an occasion

na the present to briefly recapitulate them. For upwards of forty years, then, he has held a prominent position in the working staff of the Royal Horticultural Society. He entered the Society's service in 1824, the second year after the establishment of the garden at Chiswick, and in 1826 was appointed to the charge of the Fruit Department, which then contained the finest and most extensive collection of fruits in Europe. At that time comparatively few of the varieties were known in this country, and the whole nomenclature was in a state of confusion, requiring unwearied application and perseverance to clear it up, so that the riches of the collection might be made available to the Fellows of the Society, and to the country. In 1831 a 'Descriptive Catalogue' of these fruits was published, from memoranda taken at Chiswick, and in this valuable work Mr. Thompson, with great success, succeeded in carrying out his design of indicating the good and bad sorts, together with their synonyma, and such brief characteristics as it was thought would be most generally useful. By means of this catalogue a knowledge of the superior kinds of fruits was much more rapidly spread throughout the country than it could have been by any other available means. The distribution of scions of new fruits was consequently carried on with assiduity, and much consideration was bestowed in endeavouring to select such kinds as were most likely to succeed in the localities for which they were destined.

"While this important work was year after year being carried out, Mr. Thompson was engaged in making experiments both in the fruit and kitchen garden departments, carefully reporting the results; in taking descriptions of new varieties of fruits as they came into bearing; and in preparing another edition of the Fruit Catalogue, which was published in 1842, and a supplement in 1853. These descriptions and records have been of the greatest practical utility. Upwards of two thousand pages of the Society's various publications have been written by Mr. Thompson, but the Fruit Catalogue claims prominence, as having been the standard of fruit nomenclature in this country; while his 'Gardeners' Assistant,' a work not connected with the Society, may be characterised as the best and most scientific of compendious treatises on modern gardening.

"For nearly a similar period Mr. Thompson has devoted much attention to meteorology. The Meteorological Journal of the Society, which was commenced in 1826, and which has been carried on by him since 1830, gives the readings of the barometer (corrected for temperature, &c.), morning, noon, and night; of the thermometer, maximum and minimum, in sun and shade; and of the hygrometer; comparatively with averages of forty years, deduced from 219,000 observations of the various instruments. Such broad averages afford what must be considered as true means with which extremes may be compared as regards heat, pressure, and moisture. The observations of sixteen years have been translated from the "Transactions" of the Horticultural Society into those of the Royal Philosophical Society of Berlin; and up to the present time a weekly return has been published in the *Gardeners' Chronicle*. Among other papers from Mr. Thompson's hands, connected with this branch of science, is a Table of Temperatures for the use of gardeners, published in the Journal of the Horticultural Society, which furnishes an idea of the climate of some nine hundred places, situated in different latitudes.

"With a modesty peculiarly his own, and with a degree of plodding perseverance which cannot be too highly recommended as an example to the rising generation of horticulturalists, Mr. Thompson has worked on at these, his favourite pursuits, with zeal and assiduity, setting before himself the object of rendering service to science rather than that of personal gain; and now after a long and useful career, when his physical powers begin to fail him, it has been thought that an expression of public sympathy in acknowledgment of his life-long labours, would serve to gladden and solace the remaining years of his life.

"It is proposed that a subscription list be opened under the management of the Committee, and that a money Testimonial be presented as soon as a reasonable time for response has elapsed. Subscriptions, which will be duly announced, will be received by any member of the Committee; by the Society's bankers (London and County Bank, Kensington); by the Secretaries—Dr. Hogg, 99, St. George's Road, Pimlico, S.W., and Thomas Moore, Esq., Botanic Gardens, Chelsea, S.W.; or by James Richards, Assistant Secretary of the Royal Horticultural Society, South Kensington, W."]

ENTOMOLOGICAL SOCIETY'S MEETING.

THE June Meeting of this Society was held at the rooms of the Linnean Society, at Burlington House, the President, Sir John Lubbock, Bart., in the chair.

Mr. F. Pascoe exhibited various interesting Coleoptera, from Graham's Town, South Africa, including some very rare Longicorns, and Mr. T. W. Wood specimens of a Tortoise-shell Beetle, closely allied to *Vanessa arctica*, from British Columbia, remarkable for the pale band of the hind wings being denuded of scales.

Mr. Stainton exhibited the different states of a small Moth, *Earias siliquana*, which has proved extremely injurious to the cotton crops in both Upper and Lower Egypt, the caterpillar eating the ovary of the flower and champing to a chrysalis within the ball of cotton.

Mr. F. Bond exhibited specimens of a species of Tortricids, new to the country, taken by Mr. Meek at Darent Wood; also a bright golden variety of *Adela DeGeerella*.

Mr. F. Smith exhibited specimens of a solitary Wasp, *Odynerus quadratus*, which had built its cells at the end of an empty compartment of a razor case which had been damaged. The cells were irregularly arranged, and had produced ten male and four female Wasps. The cells of the females were, however, all together at the furthest end of the case. The insects had remained in the larva state till the 20th of March. On the 20th of May they were found to have changed to pupae, and at the beginning of the following month the perfect insects were produced. Other instances were mentioned in which the Wasps had selected the crevices of locks, flutes, and the bindings of books for the reception of their nests.

Mr. S. Stevens exhibited a number of Hair-worms (*Gordius* or *Mermis* sp.), which had been observed in the morning of the day of meeting shortly after a violent storm of rain. They were noticed swarming on Rose bushes and other plants, and had been seen simultaneously by Mr. Stevens at Kennington and also at Ashford on Rose bushes. Mr. Weir had also noticed them at Brixton, and Mr. Bond near the Regent's Park, also on Lushes. They were about 2 inches long, and their ordinary condition of life is that of parasites within the bodies of other insects.

Sir John Lubbock exhibited *Epidapus Venaticus*, a remarkable small species of Gnat, which is entirely destitute of wings. It is of very great rarity in this country, having been only previously taken in the Isle of Man. The President had found it in his own grounds at High Elms, Kent, under decaying bark.

Some observations were made relative to Mr. Smith's paper on the comparative rarity of males or females in certain species of insects; and Mr. MacLachlan mentioned a species of Saw-fly, which might then be taken flying over Fern in the utmost profusion; but among thousands of females not a single male could be found. The same also was observed respecting a small Beetle, *Tornicus villosus*.

In answer to an inquiry by Professor Westwood as to the existence of any variation in the colour of the larvae of the different sexes, Mr. Smith observed that he had at one time thought that the ivory white and saffron yellow coloured larvae of the wild Bee, *Anthophora retusa*, might be of the opposite sexes; but he had subsequently reared males and females indiscriminately from each kind of larva.

THE July meeting of the Entomological Society (being the last of the present season according to the new arrangements for discontinuing the meetings during the long vacation), was held on the 1st inst., the President occupying the chair. It was stated that the species of Hair-worm exhibited by Mr. S. Stevens at the preceding meeting, and which had attracted so much attention from its simultaneous appearance in vast quantities in different places, proved to be the *Mermis nigrescens*. A new part of the Society's "Transactions" was laid on the table. Mr. MacLachlan exhibited a Spider, *Ciniflo forox*, entirely covered with white mould; also living specimens of a large flat Spider and a Centipede taken on board a ship from Manila. Mr. Kippert sent for exhibition portions of an Orange tree from Sidney greatly infested by insects, which proved to be a small species of *Coccus*, entirely covering the bark in the same way as the Beech stems are sometimes covered in this country. Mr. Stainton exhibited a minute new species of Moth reared from the Elm, in the south of France, in the months of February and March. The Hon. T. De Gray exhibited a rare *Eupecilia* taken in Norfolk, and *Hypercallia Chrisnana* from Kew.

Mr. A. R. Wallace communicated an elaborate memoir on the Cetoniae of the Malayan Archipelago, where the species appear to be comparatively rare, since from thirty localities visited by the writer during his eight years' travels, he had only secured eighty-five species. The Longicorn Beetles, on the contrary, were very numerous, as he had taken more than a thousand different kinds. The Cetoniae are very fond of flying over the Palm tree flowers and Melastomae. Mr. Trimen, who had recently returned from South Africa, had found them not only in flowers, but also lapping up the sap of wounded trees; and Mr. Kaper had found them lapping up the sap of the Sugar Palm used for making toddy.

The President communicated a remarkable memoir by Mr. Lowe, of Edinburgh, in opposition to the parthenogenetic theory of the development of the males of the honey bee by unimpregnated queens, detailing a series of experiments, which had resulted in the production of hybrid males, which would not have been the case unless the eggs from which they had been produced had been fecundated by being brought into contact with a male of a different species.

NOTES AND GLEANINGS.

WE are pleased to be able to announce that at a meeting of the Council of the Royal Horticultural Society, held at Bury St. Edmunds on Tuesday, it was unanimously resolved to confer a Forty-guinea Fellowship on Mr. D. T. Fisher, of Hardwicke, for his great exertions in connection with the Show, which is now being held at Bury under the auspices of the Society.

It will be seen by our report that the prizes offered by the proprietors of this Journal for the two best-arranged desserts at the Bury Show of the Royal Horticultural Society have been respectively gained by Mr. Carmichael, gardener to

H.R.H. the Prince of Wales, at Sandringham, and Mr. Blair, gardener to Sir G. Broke Middleton, Bart., of Shrublands Park.

— THE Annual Conversazione of the Royal Horticultural Society will be held on Wednesday, the 24th inst. The Society's next examination of young gardeners will be on the 30th and 31st of December.

— MANY will regret to hear, that after a long continuance of declining health, caused by paralysis, Mr. George Paul, of the Cheshunt Nursery, died on the 7th inst., aged 56.

— MR. T. L. PLANT has published in the *Medical Times* the following table, from nineteen years observations, showing the earliest and latest dates on which the foliage or blossom of various trees has commenced expanding, compared with the same observations in 1867:—

	Earliest.	Latest.	1867.
Balsam Poplar (<i>Populus balsamifera</i>)	March 6.	April 19.	April 15
Larch (<i>Abies Larix</i>)	March 21.	April 14.	April 14
Horse-chestnut (<i>Æsculus Hippocastanum</i>)	March 17.	April 19.	April 19
Sycamore (<i>Acer Pseudo-platanus</i>)	March 23.	April 23.	April 25
Damson blossom (<i>Prunus domestica</i>)	March 23.	May 13.	April 17
Lime (<i>Tilia europæa</i>)	April 6.	May 2.	April 30
Beech (<i>Fagus sylvatica</i>)	April 19.	May 7.	May 1
Spanish-chestnut (<i>Castanea vesca</i>)	April 20.	May 20.	May 4
Oak (<i>Quercus robur</i>)	April 10.	May 26.	May 3
Ash (<i>Fraxinus excelsior</i>)	May 13.	June 14.	May 16
Mulberry (<i>Morus nigra</i>)	May 12.	June 23.	May 16

— THE Melbourne Botanic Gardens, we learn from the *Argus*, with the adjoining park reserves, comprise an area of about four hundred acres. They are situated on the south banks of the river. Of this area twenty-one acres are devoted to floral cultivation, eighteen are planted with select specimens of trees and shrubs, eleven are occupied by the lake; nearly the whole of the remainder is planted with Pines, Cork Oaks, and many other kinds of useful forest trees, besides hedges and copses. The lake contains six artificial islands of picturesque appearance, which are the favourite haunts of large quantities of waterfowl, including Swans, Geese, Pelicans, and many smaller kinds. The gardens include a Palm-house (the largest conservatory in Australia), three smaller greenhouses, a house for the Victoria Regia, and three forcing-houses. The plants kept in pots vary from 40,000 to 50,000. Nearly 450,000 plants have during the last nine years been sent out from the gardens for planting in various public reserves in all parts of the colony, and about 420,000 seed packages have been forwarded either to colonial institutions or abroad for interchanges. About 21,000 trees of the most handsome and useful kinds from all parts of the globe are now growing in the gardens. The length of the various walks is fifteen miles, all of which are planted with trees or ornamental shrubs. The buildings, waterworks, iron fencing, and other works of permanent character are valued at £29,000. The main basis for the operations which have brought the gardens into their present form was laid in 1857, at which time the Government secured the services of Dr. F. Mueller, F.R.S., for their administration. The department of which they form a part also comprises a scientific branch, with Dr. Mueller as Government botanist. The museum of dried plants is by far the largest in the southern hemisphere, and contains about 300,000 specimens. A laboratory is kept in working order for testing the capabilities of Australian plants for affording useful products, such as tar, vinegar, oils, dyes, paper materials, textile fibres, chemicals, &c.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Broccoli, see that the newly-planted crops of this and winter Greens receive a good watering or two to give them a start, provided the weather is bright and dry. *Endive*, sow another bed forthwith; this will come in very useful. *Celery*, follow up planting as spare ground and suitable weather occur, and be sure to water most thoroughly that already planted. People sometimes complain of their *Celery* plants "running." *Celery* plants in a gross state need little more than drought to bring on flowering. *Coleworts* (Winter), prepare a good breadth of ground for a crop, do not be afraid of too much manure for them. *Peas*, loosen the ground gently near the rows of advancing crops, and water if necessary.

FRUIT GARDEN.

Persevere in pruning back, or eradicating, all superfluous breastwood, more especially in trained trees. Complete all summer nailing as soon as possible, remembering that the wood of Peaches, Nectarines, and Apricots is seldom over-ripe in this climate—frequently, indeed, the reverse. Disbud the gross wood

from Figs, reserving the moderately strong wood, but, above all, that which is short-jointed. When heavy rains have-beaten the surface of the ground, the latter will require to be stirred. Fruit trees thrive better in borders that are frequently forked, properly manured, and cropped with Lettuces, or other plants that do not root too deeply, than where the ground is not cropped, and but seldom stirred. It will, therefore, be advisable to fork over the borders which have not been recently disturbed, taking care not to injure the roots of the trees by the operation. This had better be performed whilst the ground is sufficiently moist, and if dry weather should set in, copious waterings ought to be given. It is frequently the case, that the surface of a border forming a regular slope is smoothly raked, so that water, from heavy rains more especially, readily glides off, and a less beneficial supply from artificial watering must be substituted. Sometimes crops are sown or planted in rows across the borders, and afterwards landed up; the furrows consequently formed exhibiting a close system of surface drainage, not at all objectionable in the case of a very wet soil and season, but highly so in summer under ordinary circumstances. Proceed with budding Cherries and Apricots, and with other fruit trees, as the buds become in a fit state, which in this season will generally be the case rather later than usual.

FLOWER GARDEN.

Roses going out of bloom should be constantly gone over, cutting off all dead flowers, &c., and Moss and other varieties should be layered as soon as the young wood is sufficiently advanced in growth. Pinks now out of bloom, from which pipings have been taken, if they have blossomed two years, should be cut off close, or removed, to make room for young plants of this year's striking. Dahlias require constant care in regard to tying up as they advance in growth. Sweet Williams, Wall-flowers, Dianthus, and other hardy biennials, should be thinned, planting out the thinnings into borders, or into nursery-beds till spring. Lawns should be kept continually mown during showery weather, and edgings of walks clipped. See that strong stakes are afforded to plants of heavy foliage and gross habits, as Dahlias, Delphiniums, Asters, Phloxes, &c. Continue to fill up blanks as they occur, from the reserve ground, and attend to the layering of Carnations.

GREENHOUSE AND CONSERVATORY.

Follow up shifting with such hardwooded tribes as require it. A turfy compost of three-parts sandy peat soil of a fibrous and lumpy character, and one-part sound loam of a similar texture, will suit the majority. The more tender kinds will require lumps of charcoal, stone, or crocks introduced occasionally until near the surface of the pot. Let every attention possible be paid to drainage. This cannot be too complete, taking care especially to use very broken crocks at the bottom, for if these lay too flatly and become closed-up in consequence, it matters little how much depth of drainage material rests upon them—all will be stagnation. In the mixed greenhouse shifting will be the order of the day. Attend to the principles of thorough drainage as explained above. Now is the time to lay the foundation of a good late display. Cinerarias, Chinese Primroses, the Anne Boleyn Pink, Heliotropes, Fuchsias in succession, Chrysanthemums, and, above all, the Perpetual, Tea, and other Roses must be well attended to in regard to watering, shifting, &c. Remember that the final shift should be given in good time to those intended to flower in the autumn. Many of the plants which are now growing rapidly should be set in the open air, as those of a soft nature are apt, under good and free cultivation, to become too succulent, and, as in the case of stove plants, they are subject to damp off or mildew under glass. Proceed with the propagation of all kinds of exotic plants, and especially of Pelargoniums. Expose those to the open sun intended for next season's flowering, to harden and perfectly mature the wood is of paramount importance, more especially for plants intended for exhibition.

STOVE.

Admit more air into the house as the season advances, because although this is the period when every advantage ought to be taken of heat and light, still the confinement of a stove is apt to draw the plants, especially if carried out too late in the season. Growth is now required in most kinds of plants, but the great art is to harden or perfectly mature that growth, or the plants will suffer much during winter. Many of the plants in an advanced state may now be placed in the greenhouse, which should be closed on cold nights.

PITS AND FRAMES.

Put in cuttings of the best kinds of Antirrhinums, Mule

Pinks, herbaceous Phloxes, &c., either under hand-glasses or in cutting-pots, and place them in cold frames or pits. Those already rooted must be hardened-off by degrees to be ready for planting out. Shift Balsams, Chrysanthemums, &c. Chrysanthemums which have been planted out and are now growing tall may have their branches regularly pegged out, so as to have their tips turned up preparatory to their being layered towards the end of next month. The Phloxes, &c., should be slightly watered when the cuttings are put in, and should receive a slight shading in sunshine for the first month, after which they may be gradually inured both to sunlight and air.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

GENERAL work much the same as in previous week. Would have planted out winter stuff, but had no ground at liberty. Will have some ground cleared of Potatoes before this is printed, which ground will be immediately filled; and as soon as a Strawberry-quarter is cleared of its fruit, that will be trenched and planted. This is one of the disadvantages of having a small kitchen garden in proportion to the demands made upon it, so that a piece of ground can never be many days empty. If we feel the least promptings of envy, it is on observing in April and May whole quarters undergoing fallowing treatment before they are filled with Broccoli and Winter Greens. Sowed Cabbages for the first spring crop, and will sow again in eight or ten days.

We are anything but insensible to the value of novelties in Peas, or anything else, but there are three old Peas now that no one with a small garden should be without, when their wonderful fecundity is taken into consideration, and these are Sangster's No. 1, for being early, though not so early as some others; Dickson's Favourite for a second succession, that bears such loads of its large well-filled pods; and the little sweet Pea, Knight's Dwarf White Marrow. This for size has no chance with the Ne Plus Ultra, Veitch's Perfection, Dwarf Mammoth, Excelsior, &c., but it is very sweet and a wonderful bearer.

Much time has been taken up in keeping weeds down before they became too large for the hoe, as the fine rains followed by such hot weather brought them up in shoals. When we could not get at them all at once, we had the scattered plants of Groundsel taken up and carried away before the bloom opened. In the case of strong plants showing bloom, it is little use cutting them up and leaving them in dull weather, as the plant in such a case will have enough of succulence to perfect the seeds. It does seem amazing where all the weeds come from. A few weeks ago every bit of ground was hoed, and yet lately the surface in many places was getting green. Last year we were overspread everywhere with Sow Thistles, as if a crop had been sown, but this year we have scarcely seen any. We believe we acquire many weeds by collecting compost from the sides of the highways. In fact, in most places the hedges by the sides of the highway are disgraceful. From one hedge we have seen enough of Thistle-down flying with the seed at its bottom, to make sure that the Thistle shall not be got rid of in that county. We little think when we allow a few Groundsel plants to seed and scatter their progeny, how much work we are preparing, not only for ourselves, but even for those who come after us. We have frequently removed 6 inches of surface soil, dug up what was left 18 inches deep, placing the lowest layer carefully on the surface, and covered with close hand-lights, and in the summer the tops of the hand-lights would be pretty well lifted up by varieties of wild plants, chiefly weeds. We hardly know how long some seeds will retain their vitality if placed beyond the reach of air, nor yet how soon they will germinate when having enough of moisture and exposed to atmospheric influence. The only economical remedy for weeds in a garden is to get them cut up before they are much more than an inch in height, when the sun will soon shrivel them out of sight. We see before our eyes a proof of this. In the press of matter a piece of new herb ground was let alone too long, and to save the herbs we shall have to pull up the larger weeds, which will involve a great loss of time, as much as would have sufficed to drive the hoe slightly through it a dozen of times.

Sloping Banks.—These are of great utility in a garden, especially when the banks run from east to west, and thus have one side exposed to the south, and the other to the north, as thus early and late crops are secured. The banks may be made of any size, from 8 to 18 feet or more at the base, and merely require to have ground thrown from the sides to the centre, so as to leave the bank in a pyramidal shape like the

roof of a span-roofed house. A bank 10 feet in width at base, and about 3 feet in height at the centre, or ridge, is very useful. This, if the bank is equal on each side, will give a slope of about 6 feet, thus increasing the surface from 10 to 12 feet. A more useful bank, however, is formed by having the top of the ridge nearer the north than the south side, so as to have a slope of 7 feet to the south, and a rather more steep slope of 5 feet to the north. The south side comes in admirably for early salads, early Potatoes, Turnips, Cauliflower, &c., and the north side does well for summer salading, Turnips, &c. The south also answers well for early Strawberries, and the north side for late ones. We find, also, that, owing to being free from sudden changes, the north side does well for Lettuces, &c., in winter, where they often stand uninjured, whilst cut up on the south side. For early work we often stick a row of evergreen branches on the ridge, which gives the plants on the south side the advantage of a fence or hedge in moderating the force of the north winds. These banks come in as a good substitute for the fruit-tree borders in front of walls with a south aspect, which are generally too freely used, because in reality the position for early crops is so useful. These banks when once thrown up will not be hastily thrown down again, though, as they depend entirely on the soil in the garden, they can be levelled down again when people get tired of them. They can be more easily made high in the centre if two or three banks are made as the valley that forms a small pathway on each side of them may be taken out deeper, and thus it will operate as a surface drain as well as a pathway.

Their general usefulness acknowledged, there are just two things we would notice concerning them. First, there is the objection made, that from the slopes the plants want more watering than when grown on the level. We do not find this to hold true in practice. Even on the south side the greater power of the sun is counteracted by the greater depth of soil, especially when kept surface-stirred. The second objection, whilst acknowledging the benefit of the two climates, denies that we obtain any more available surface than would be obtained from the base of our triangular-looking ridge. It is contended that no more plants can be grown on these slopes than would be grown on the level base. We lately had a friendly chat on this subject with a reverend and learned gentleman, and like most discussions, we presume, it ended in each being strengthened in his own opinions. In such small ridges we agree that in the case of tall plants little would be gained by the increase of surface; but in all low-growing plants we are of opinion that the increased surface is just so much increased available space. Stand in front of a border, which is again in front of a wall, and you can easily count how many plants it will require to go across from walk to wall on the flat; but now stretch a rod from under the coping to the wall and the side of the walk, and in proportion to the width of the border will you increase the surface line, so that there you will require more plants to go from front to back at equal distances, and these increased numbers will each do as well as if on the flat, and have nearly as much direct light, just because they stand tier on tier above each other. We are supposing that the plants are dwarf, say from 12 to 18 inches in height.

We know that learned men have insisted, as a self-evident proposition, that the steep sides of a lofty mountain can grow no more trees in perfection than would have grown on the base of that mountain, as though the surface is increased, the base line and perpendicular lines to the light are not increased. We believe that even more lofty trees can be grown on the increased surfaces, and all the more the more lofty the hill, other things being equal, because the higher trees receive direct light without robbing the lower trees of their due portion. Another familiar illustration we may give. Take a greenhouse with a sloping roof, either lean-to or span-roofed. If that house is to be filled with large plants, it matters little whether there be a stage or not, we can place no more in it than will get access to light, if we wish them to thrive. But in this house we wish to give justice to as many plants as possible—say ranging from 6 to 18 inches in height. Would we on the base of the mountain, or the base of the bank theory, consider we could do no better than fill the floor of the house, or a flat table stage to bring them near the glass? With that plan we have no fault to find, it has its conveniences, but assuredly we should not think of resorting to it, but would at once have sloping stages, and have the plants placed thickly tier above tier, if we wished to give the greatest number of low plants the best chance for room and light in such a house. However, in this and all other matters, we are open to conviction. Only if wrong in our ideas,

we must come to the conclusion that the sloping stages in our plant-houses, as well as sloping banks in our gardens, are, as respects giving good healthy room to more small plants, all a mistake and a waste of means.

FRUIT GARDEN.

Much the same as last week. Pruning, thinning, watering, and syringing, and protecting from robbers of all kinds.

ORNAMENTAL DEPARTMENT.

We trust the lawns are now secured from getting parched this season, and but for some Plantains on newly-laid turf, would look beautiful. Most of the beds have been finally made up, edgings regulated, and if let alone, will be showy, and are already pretty well, though not quite full of bloom yet. We were glad to keep our plants in safety until the frosts of May were gone. There has been an extra demand for bedding plants this season, owing to so many having been lost that were early planted. We think it safest, in general, to wait until towards the last week in May.

Much time has been taken up in potting Pelargoniums, Balsams, Caladiums, Ferns, Gesneras, &c., but instead of insisting on such matters, there are some things we would wish to bring to the consideration of our amateur readers, as respects their bedding plants.

First. Let them recollect that the interest in their beds will greatly depend on their always appearing in health, and not a decayed leaf or floret to be seen. And a great attraction in a bed, so long as a bit of earth is to be seen, is to have the surface clean and stirred, instead of hard or baked, and cracking; of course, a weed is out of the question. One such nice bed will yield more pleasure than a dozen showing the signs of tawdriness and neglect.

Secondly. As soon as the plants are well established, we would recommend cuttings to be taken off early. Verbenas are apt to have the thrips if taken off late. The side shoots of Scarlet Pelargoniums will be the best. As giving least trouble we advise all cuttings, if possible, to be put into pots or boxes, as they can be so easily moved in changes of weather. Verbenas, and things of that kind, to go under glass, Pelargoniums, &c., will do in the open air. If planted out in a border, they must be lifted and potted. For general things, the pots should be filled half full with drainage, then sandy loam, and a dash of sand on the surface.

Thirdly. Many are troubled as to getting suitable soil for such purposes. We will indicate a few sources whence good soil can be obtained for all such purposes. Have you a kitchen garden with soil ridged up in winter? then take some barrow-loads carefully from the surface when dry in spring, and keep under cover. Do the same from ridges of ploughed land if come-at-able, skimming the surface very thinly. If neither of these is accessible, remove the turf from the sides of some highway, and get the soil immediately beneath it, which will consist chiefly of the soil of the district mixed with ground stones. These with good sand will answer for propagating all such things, and growing them, too. Sometimes without buying silver sand, it is difficult to obtain good sand free from chemical properties that plants do not like. There is road grit, rough sand washed by rains from the sides of roads, that everything seems to like, and the amateur may easily obtain a little of it. If he wants to have it very nice, let such sand be washed several times in a tub or pail, pouring the water off repeatedly, which will take away all the earthy matter. Then turn out the sand to dry, and if it is wished to be very particular, pass it then through a fine sieve, which will leave out a good many little stones about the size of peas, and less and larger. The fine sand will be about as good as the finest silver sand, and the rough bits kept in by the fine sieve, will be valuable above the crocks as drainage, and also for mixing with the soil. Such sand in the rough state will do admirably for mixing with the earth referred to, and the finest sifted carefully kept will do admirably for placing on the surface of pots and boxes. These means resorted to, there are few districts where the amateur may not make himself independent of the necessity of sending to distances for soils, sands, &c., and there is a pleasure in being able to make all such composts without sending and paying for them, and, what is often worse, waiting for them until the best time is lost.—R. F.

COVENT GARDEN MARKET.—JULY 17.

THIS week's unsettled weather has materially affected us here, the fruit arriving in very damp condition, some growers not venturing to pick at all. The Strawberries and Raspberries especially have suffered

from the heavy splashing rains. Choice and good samples of Currants and Gooseberries have consequently met with a better sale. The first crop of West Indian Pines has just arrived.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....½ sieve	3	0	4	0	Melons..... each	3	0	5	0
Apricots..... doz	3	0	4	0	Nectarines..... doz.	6	0	10	0
Cherries..... lb.	0	6	1	6	Oranges..... 100	8	0	14	0
Chestnuts..... bush.	0	0	0	0	Peaches..... doz.	8	0	15	0
Currants..... ½ sieve	3	6	5	0	Pears (dessert)..... doz.	3	0	4	0
Black..... doz.	5	0	6	0	Pine Apples..... lb.	4	0	6	0
Figs..... doz.	3	0	6	0	Plums..... ½ sieve	0	0	0	0
Filberts..... lb.	0	0	0	0	Quinces..... lb.	0	0	0	0
Coba..... lb.	0	9	1	6	Raspberries..... lb.	0	6	0	8
Gooseberries..... quart	4	4	0	6	Strawberries..... lb.	0	6	1	6
Grapes, Hothouse..... lb.	2	6	0	6	Walnuts..... bush.	10	0	20	0
Lemons..... 100	8	0	12	0	Green..... per 100	1	6	2	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes..... each	0	3	0	6	Leeks..... bunch	0	3	0	0
Asparagus..... bundle	0	0	0	0	Lettuce..... per score	1	0	0	0
Beans, Kidney, per 100	1	0	2	0	Mushrooms..... pottle	2	0	3	0
Scarlet Run..... ½ sieve	0	0	0	0	Mustard & Cress, punnet	0	2	6	0
Beet, Red..... doz.	2	0	3	0	Onions..... per doz. hchs.	5	0	0	0
Broccoli..... bundle	2	0	3	0	Parsley..... per sieve	3	0	4	0
Brus, Sprouts ½ sieve	0	0	0	0	Parsnips..... doz.	0	9	1	0
Cabbage..... doz.	1	0	1	6	Peas..... per quart	0	6	1	0
Capricans..... 100	2	0	3	0	Potatoes..... bushel	4	0	6	0
Carrots..... bunch	0	6	0	8	Kidney..... do.	6	0	10	0
Cauliflower..... doz.	3	0	6	0	New..... lb.	0	2	0	0
Celery..... bundle	1	0	2	0	Radishes doz. bunches	0	9	1	0
Cucumbers..... each	0	6	1	0	Rhubarb..... bundle	0	4	0	0
pickling..... doz.	0	0	0	0	Savoy..... doz.	0	0	0	0
Endive..... doz.	2	0	0	0	Sea-kale..... basket	0	0	0	0
Fennel..... bunch	0	3	0	0	Shallots..... lb.	0	8	0	9
Garlic..... lb.	0	8	1	0	Spinach..... bushel	2	0	3	0
Herbs..... bunch	0	3	0	0	Tomatoes..... per doz.	2	0	3	0
Horseradish..... bundle	2	6	4	0	Turnips..... bunch	0	6	0	0

TO CORRESPONDENTS.

.. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

DISEASED MEDLAR LEAVES (*G. Moss*).—They are attacked by a parasitical fungus. We would strip off all the affected leaves, even if it denuded the tree, and burn them. Paint the branches and trunk also, with a creamy mixture of clay, flowers of sulphur, and water. This is the only mode of eradicating the fungus, for it will ripen and shed its spores, so that the disease will spread further and further.

CATERPILLARS ON ROSE LEAVES (*A. H.*).—The surface of your Rose leaves has been partially gnawed off by the larvae of a small black-winged saw fly, *Selandria ethiops*, or an allied species (we cannot determine precisely, as the specimens were smashed in the post transit). Lime water will kill them, but it would have been better earlier in the spring to have employed children to look over the Rose trees, and catch the small black flies, and so prevent the deposition of their eggs upon the midribs of the leaves. When full grown the larvae descend into the earth to become pupæ.—W.

SAND (*Inquirer*).—It will do very well for the same purposes as silver sand.

PLANTAINS ON LAWN (*T. C.*).—Mr. Fish in his "Doings of Last Week," has given details in our previous Number.

VARIEGATED BINDWEED (*W. S.*).—We fear that, as in similar instances we have known, it will not be permanent. It is very like the Japanese Honeysuckle.

MAKING MUSHROOM-BED IN SEPTEMBER (*E. D.*).—We are glad that our advice as to the Mushroom-bed answered. We have no doubt a similar bed made in September would answer equally well, but it would require more protection as the nights become colder. With very unpropitious material we have scarcely ever been without Mushrooms for a number of years, and, therefore, can tell how to make the most of materials.

ADMITTING FRONT AIR TO GRAPES (*Lincoln*).—You may admit a very little front air during a hot day, but we would not admit much until the berries begin to colour. Some of our best gardeners give such front air freely. The rust has nothing to do with your ventilating. Very possibly it is the result of sulphur on the pipes if you have used any. A little fire and your early air-giving is all right. Leave a little on all night.

ORNITHOGALUM THYRSOIDES ALBUM AFTER BLOOMING (*Thorn*).—If it is in pots the easiest management is to allow the bulbs to ripen by withholding water gradually until the foliage decays, then set the pot in a cool, dry, shady place, and prevent the bulbs getting over-dry until they begin to move, when water must be given. A very good plan is to take the bulbs up carefully when the leaves are all withered, and place them in a saucer, and cover them with sand, and set them in a cool dry place. When they begin to shoot pot afresh. We think they are safest thus managed.

APHIDES ON ROSE TREES (A New Beginner).—I have not an aphid about the place. There are two seasons to be specially attended to in keeping down aphides—namely, the early spring and September. Catch and kill all you can, and syringe closely after the catching and killing. Also syringe frequently, or, when you water the Roses, pour some over the leaves. The water will wash off the helpless broods. The September aphides are viviparous, but the spring and autumn broods are viviparous. Kill the spring and autumn broods, and you will not be troubled with them in the intermediate season. They have ten broods in a year. The first broods are hatched from the eggs of the last brood of the preceding year. Mr. Weaver is right—"Catch 'em and kill 'em," and wash the leaves off. I have, by watering the roots and washing the leaves, no sign of fungus of any kind. The first aphides in the season make their appearance on the plants under a south wall, and usually, where trees are lofty, on the top branches under the eaves. There they breed and descend, increase and spread, as the weather gets hot, with inconceivable rapidity. The blooms are still abundant and fit for specimens. They began to appear on the 8th of June, and they will not stop till frost cuts them off. Crowds come day after day, and go away delighted.—W. F. HANCLIFFE, *Oxford Fitzpatric*.

BEEF LEAF INSECT-EATEN (Beet Root).—The leaves sent appear eaten by slugs. Fowls will certainly peck at the leaves of Beet, and eat them, but they and slugs may be kept off by strewing powdered or dry lime over the leaves, and this repeated a few times, and particularly at dusk in showery weather, will destroy the slugs and make the leaves very distasteful to the fowls.

BLACK CURRANT BUSHES UNFRUITFUL (Youngster).—We advise the cutting out of the old wood, and to limit the pruning to that and the removal and shortening of any straggling shoots. You should give a good dressing of manure in autumn, and peatly point it in, but not so deeply as to injure or disturb the roots. You may water them once or twice a week with liquid manure during dry weather, from May to August, or guano water, made by dissolving 1 lb. in twenty gallons of water.

GUANO FOR BEDDING PLANTS (Idem).—You may water your plants with guano water at the rate of 2 ozs. of guano to a gallon of water, it being used once or twice a week during dry weather, and a thorough soaking given; or you may sprinkle a little of the dust in between the plants over the soil, being careful not to let it fall upon the foliage of the plants. It should not be given excessively; 1 lb. to every twenty yards of surface is sufficient to give at one dressing.

LAWN BROWN IN SUMMER (H. D.).—You may next February or March apply to your lawn a dressing of rich compost, and early in April, after giving a good scratching with an iron rake, sow over it 4 lbs. *Cynosurus cristatus*, 2 lbs. *Festuca duriuscula*, 2 lbs. *Poa nemoralis*, 2 lbs. *Lotus corniculatus* minor, and 4 lbs. each *Trifolium minus*, and *Trifolium repens*, rolling well afterwards.

EVERGREEN FOR PORCH (Idem).—For a warm aspect we advise *Escalonia macrantha*; if the aspect is bleak, *Cratægus pyracantha*.

GILIA ACHILLE.FOLIA (Dumble-down-dreary).—The plant enclosed to you is botanically *Gilia laciniata achilleifolia* of Benthams, and has purple flowers. It is not *Gilia elongata*, of De Caudolle, now the *Illegia elongata* of Benthams, which are identical, having deep blue flowers, and woolly foliage having a grey hue in the way of a *Didiscus*. It has not as yet entered seedsman's lists, and is not in cultivation.

DICTAMNUS PRAXINELLA ALBUS (Idem).—The plants of this from seed sown in the third week in May, ought to appear above ground early in June, and probably have done so, and been devoured by snails or slugs.

CONOCLINIUM INTHINUM CULTURE (A Young Subscriber).—A compost of equal parts of sandy peat and turfy loam will grow it well, adding sand liberally, and providing good drainage. It requires the temperature of a stove, or from 55° to 60° in winter at night, with a rise of 10° by day, and 65° to 80° in summer. A light and airy situation is essential, also a moist atmosphere when growing, and a moderately dry atmosphere and soil when at rest.

TEMPERATURE FOR PEACHES AFTER STONING (Idem).—A temperature of 55° at night, and not exceeding 60° from fire heat, is suitable for Peaches after stoning until ripe, air being plentifully admitted.

FERNS FOR A GLAZED PORCH (Idem).—For such a place for a commencement, we would use only British Ferns, such as the best varieties of Hart's-tongue (*Scelopendrium*), which in such a position would keep green all the winter and look well; and, thou, as occupying little space, you should have *Asplenium Trichomanes*, *Asplenium ruta-muraria*, *Adiantum capillus-Veneris*, *Blechnum boreale*, *Asplenium fontanum*, and *Allosorus crispus*. These will not want more than 1 foot each. For larger Ferns we would advise *Athyrium Filix-femina*, *Lastrea rigida*, *Osmunda regalis*, *Polypodium dryopteris*, and *Polypodium vulgare*, which is beautiful in such a place in winter, especially if covering the decaying stump of a tree, &c.

VINES IN A PIT (Idem).—We have no doubt that Vines will do if planted out in the way you propose. Soil raised to c, and some strong loam and six bushels or more of broken bones incorporated with the black light soil, and top-dressings of manure every year. You are quite aware of the unsuitableness of the place for the flue. Your idea of the board and felt to cover it is good, and as it is so high, when you want heat in the house it would be well to let that felt-covered board stand out only 2 or 3 inches from the flue, and the heat will thus be sent out lower in the atmosphere of the pit. If your stovehole and furnace for the propagating-house is much lower than the flue, then you might have a small chamber over your furnace, with a three-inch pipe from the house going in at the bottom of that chamber, and another one at the top. This would enable you to have Grapes earlier. You can have good autumn Grapes by the mode proposed, and we would suggest for that purpose three Vines, two Black Hamburghs and one Royal Muscadine.

NAMES OF PLANTS (W. H. E.).—1 and 2, *Lastrea dilatata*. (C. M.).—*Echium plantagineum* and *Banksian Rose*. (D. M.).—*Equisetum arvense*. (J. S. B.).—*Grevillea (Mauglesia) glabrata* and *Chrysanthemum coronarium*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending July 16th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 10	30.198	30.187	79	41	64	61	S.E.	.00	Very fine throughout.
Thurs. 11	30.122	29.990	77	53	64	61	E.	.09	Fine, with slight dry haze; very fine; overcast.
Fri. . 12	29.859	29.751	73	49	64	61	E.	.09	Overcast; fine, with dry haze; fine at night.
Sat. . 13	29.767	29.683	72	53	61	61	S.	.26	Overcast; showery at night.
Sun. . 14	29.769	29.595	71	48	64	61	S.	.09	Very fine; showery; very fine.
Mon. . 15	29.689	29.352	65	54	64	61	S.	.28	Rain; showers, and dense dark clouds; boisterous.
Tues. . 16	29.497	29.487	67	57	63	60	S.	.27	Showers, and dense clouds; very heavy showers; fine.
Mean	29.828	29.714	72.00	50.57	63.35	60.85	..	0.90	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

JUDGING GAME FOWLS BY SHAPE.

THE PROPER SHAPE OF THE GAME HEN.

Beak, the same as described for the cock; smaller, of course.
Comb, face, gills or wattles, and deaf ears, same colour as the cock's in red-combed sorts (a little less red), but darker or less red in the dark-combed sorts. Shape of comb, long, low, and thin, reaching well to the back of the head, evenly serrated or lobed; lobes small and quite straight and erect. High, thick, and short combs always show bad and coarse breeding.

Head, long and sharp; eyes bright and clear; face, lean, hard, and thin. Throat the same, and never too prominent or large in the gullet (cock the same). The deaf ears and gills or wattles small, close, and neat, and either red or dark gipsy in colour in both cocks and hens, and never in the least whitish, bluish, or yellowish. Deaf ears close to the face. Feathers of throat close and neat.

Neck, long, arched, and strong; close, short, hard, and neat in feather.

Back, short and hard, broad at the shoulders, and narrow at the tail.

Wings, very strong and well rounded, neither too long nor too short as in the cock, and carried rather higher and closer than

the cock's wings: shape of wing clearly discernible against the side feathers of the body.

Tail, neither too long nor too short, the two longest upper feathers slightly curved, open, fanned, and spreading, carried well up, and never at all drooping, for spirit.

Breast, broad and hard, not too round or full, nor yet too lean or sharp.

Thighs, short, hard, and muscular, and placed exactly as in the cock.

Legs, neither too long nor too short, but shorter than the cock's in proportion. Scales of legs all smooth, close, and neat, and the insteps very smooth.

Feet, as cock's in due proportion.

Plumage, very hard, close, firm, short, strong, and neat in feather.

Carriage, upright, neat, quick, active, fierce, sharp, and fiery. Weight of hens varies, of course, they being much heavier when with eggs. Average weight, 3 lbs. to 3½ lbs., or one-third smaller than the cock. Large Game hens are bad and clumsy in general, those of the middle size are best.

Judges should carefully handle all Game fowls, both cocks and hens, in judging them, if they have sufficient time to do so. Full-grown birds are, of course, better entitled to silver cups than any birds in the chicken classes, as cock chickens and stags are never "fully furnished" as to their spurs and long sickle tail feathers, as is well known to all.

In judging Game fowls, three different kinds or textures of feather are clearly discernible, in the cocks more especially. 1st, The close, hard, short, stiff, broad feather, like the ancient coats of armour to the bird, so to speak, lying so close to the body; such birds are rather scant than thick of feathers, though not too much so, of course. 2nd, The fine or narrow-feathered birds; these are often good, quick birds, but are never so hard, strong, or so "game" as the first-named sort; these birds often have the narrow, close whip or switch tails rather drooping. 3rd, The long, soft, and often coarse-feathered birds (like Malays), soft both in flesh and feather, and always inferior to the two sorts first named, being longer in body; these are the worst Game fowls, and should never take prizes; they are also quite unfit for the pit, and less healthy.

DEFECTS IN THE SHAPE OF GAME FOWLS.

1. A short, clumsy, bad-shaped head, with a wide, thick gullet.
2. A short, straight, bad beak (weak in bone).
3. A short, soft, weak neck (short-reached).
4. Narrow and long body and back (weak birds, the worst defect).
5. Narrow shoulders and breast (weak birds).
6. Breast too lean, too sharp, or too full (not hard).
7. Crooked breast-bone or keel (a deformity).
8. Flat-sided and misshapen generally.
9. Broad, long, and high rump or stern.
10. Too deep or too flat in keel or breast-bone.
11. Thighs long, weak, thin, and dangling behind.
13. Legs too long or too short, feet too much webbed.
14. Legs and thighs placed too closely together.
15. Short and Duck-footed (too much webbed).
16. Spurs clumsy, straight, and high up.
17. Squirrel-tailed, short stump wings.
18. Soft and fat in flesh (loose-fleshed).
19. Long, soft, weak, thick, and weedy in feather (loose-feathered).
20. Hump-backed, lop-sided.—NEWMARKET.

BENEFIT TO CHICKENS DERIVED FROM CHANGE OF FOOD AND WATER.

I SEE a letter from "NOTTINGHAMSHIRE" about rearing chickens, and I venture to make a remark, not because I have anything new to tell, but precisely because I have been unsuccessful, much in the same way as your correspondent.

I had a lot of fowls of mixed breeds, and I purchased five or six couples of Cochins last autumn to form a staff of sitting hens. These all laid well, and several of the Cochins brought off fine clutches in March and April. I had set these hens partly on my own hens' eggs, partly on some I had from my neighbours, but the chickens did well except a few Black Game which soon died. However, I felt I had no reason to be dissatisfied with the loss of one or two in a clutch, and having to leave home during the first week in May, the hot week, I thought many times how suitable the weather must be for my chickens. This was a great mistake. The finer the weather the more deaths in my poultry-yard. A dozen or more were gone when I returned, and half that quantity more were ready to depart. The weather became cooler again, and I had more success in rearing until the end of May, when the old epidemic re-appeared. A fortnight old and then (as your correspondent says), came the tug of war. I tried everything I could hear of to help them over the fatal time. I took them away from the same places where I had reared the others, and put the hen under a coop in a small orchard and garden. Still no better, they dwindled away. I then changed their food and water, and now I am happy to say, I feel I have got at the root of the matter. The chickens had been fed on wheatmeal and barley, and when the weather is cold they will do pretty well on it, but in hot weather barley is poison to young chickens. I give them nothing now but dry bread and wheatmeal (fourths) mixed very dry occasionally. I would give them winderings of wheat if I had it. They all do well enough now—Dorkings, Hamburgs, and Game.

Some of your readers will pity my ignorance in giving barley to young chickens, but my experience stands thus:—Cold weather, plus warm houses, plus barleymeal, equal warm weather, plus a large garden, plus bread or wheatmeal, and either of these will keep chickens up to the mark. I have every reason to think chickens do well on a grass run, provided you place the coop on a heap of ashes to keep them dry if the

weather is showery. There are many nostrums for the cure of chickens, but not one has been any use to me. Certainly one chicken survived my attempts to cure (or rather kill), it, and we have a great regard for each other. I have contrived to rear 150 chickens this season, and have lost many. Perhaps another year I may be more fortunate.—A. R. S.

CLASHING OF EXHIBITIONS.

I FULLY agree with your remarks as to the evil results arising from poultry shows held simultaneously. The Ipswich Poultry Society fixed its next Show for the first week in November, as early as last March, and immediately announced it; but notwithstanding that, the Bristol and Clifton Society fixed on the same week for its Show. The Ipswich Society has, therefore, altered the date of its Show to one week earlier. I trust that other Committees will take your advice, and will hold their Shows at such times as will prevent the too frequent occurrence of two or three exhibitions taking place at the same time. The Ipswich Poultry Society gained great popularity last year by the beauty and real value of their silver cups, and they hope to give equal satisfaction to the successful winners of the eight offered at their next Show. Mr. Beldon in acknowledging the safe arrival of his birds and silver cup says, "It is very handsome, and one of the best I have had for the money." Many other similar notes were received, which encouraged the Committee to considerably increase their prize list, and they will offer eight silver cups and money prizes, amounting to upwards of £200, and they hope that exhibitors will show their appreciation of such liberal prizes by making as many entries as possible.

Why should not societies announce the names of the Judges in the advertisements?—A WELL-WISHER OF POULTRY EXHIBITIONS.

SPALDING POULTRY SHOW.

CONSIDERING that this was the first show of the kind ever held either in Spalding or the surrounding district, it is gratifying to remark that it proved a complete success, the entries being numerous, and the attendance so good that the proceeds, after deducting all expenses, left a good balance in favour of the Committee to ensure a repetition of the success another season. No Committee could have worked with greater energy than this; its numbers were few, but experience proves that with an unwieldy managing body composed of many members, these are too apt to shift work from one to another, and, consequently, it is often altogether neglected. At Spalding every arrangement was completed in an orderly manner by the time appointed, so far as the Exhibition itself was concerned, added to which, every pen was duly returned to the railway on the very evening the Exhibition closed. It is true the catalogues were far too late as to publication, but especial care will be taken to prevent the like occurring. All payments whether of silver cups or of prize money were carried out with equal promptitude. These are matters which, though by some Committees lost sight of, tend more to insure success for the future than is generally supposed—in fact, they cannot be overvalued. The weather until about midday was most dispiriting, there being one continued downfall of rain, it then cleared up, and the Show was thronged until the time of closing. It is worthy of remark, also, that the whole of the birds, though among them were to be found Pea Fowls, Pheasants, and Wild Fowl, were safely returned without a single accident or misadventure of any kind, a very excellent tent having secured the whole of the pens perfectly dry throughout the day.

For particulars as to the Poultry, &c., exhibited, we must refer our readers to the prize list, which appeared last week, as from the delay of the catalogues it was impossible to take the usual notes on the spot. We congratulate the Committee, also, on the report so general that the subscription list has been greatly increased.

MIDDLETON AGRICULTURAL SOCIETY'S POULTRY SHOW.—We are glad to see that this Society's Show goes on prospering more and more, from year to year, and that other agricultural societies are following its good example of offering prizes for poultry. This year the Middleton Society offers twelve silver cups for poultry, and one for Pigeons. The Committee have annually increased the prizes for poultry and Pigeons, and it is now generally admitted that theirs is the largest out-door show, in these particular departments, in that part of the country. There were about 700 pens last year.

PRIZE ESSAY ON FARM POULTRY.—The prize of £10 offered by the Royal Agricultural Society, has been awarded to Mrs. Somerville, Manor Farm.

ROYAL AGRICULTURAL SOCIETY'S FARM POULTRY EXHIBITION.

THIS commenced at Bury St. Edmunds on the 15th, and is well supported. It is for "Farm Poultry" only, yet it includes Bantams. In future years we hope the poultry will be exhibited in a more easily discovered part of the Show-yard; but we must reserve a detailed report until next week, and confine ourselves to-day to the prize list.

DORKINGS (Coloured).—First, J. D. Hewson, Colton Hill, Stafford. Second, F. Parlett, Great Baddow, Chelmsford. Third, H. Lingwood, Barking. Highly Commended, J. Lewry, Bolney; J. Griggs, Romford. Commended, J. Frost, Parham, Wickham Market; J. Gunson; S. Jefferson, Whitehaven. **Chickens.**—First, J. Lowry. Second, Dr. Campbell, County Lunatic Asylum, Brentwood. Highly Commended, Dr. Campbell. Third, Mrs. Seamons, Hartwell. Highly Commended, J. Lewry. Commended, H. Savile, Rufford, Ollerton, Notts.

DORKING (White).—First and Second, H. Lingwood. **BRAMA POOTRA (Dark).**—First, R. W. Boylo, Galtrim House, Wicklow, Ireland. Second, K. Jopp, Aberdeen. Third, H. Lacy, Hedden-bridge, Yorkshire. Highly Commended, J. K. Fowler, Aylesbury, Bucks. Commended, F. Sabin, Birmingham.

BRAMA POOTRA (Light).—First, J. Pares, Postford House, Guildford. Second, H. Dowsett, Pleshey, Chelmsford. Third, F. Crook, Forest Hill, Kent.

COCHIN-CHINA (Buff).—First, R. White, Broomhall Park, Sheffield. Second, H. Mapplebeck, Moseley, Birmingham. Third, H. Lingwood. Commended, H. Mapplebeck; H. Lingwood.

COCHIN-CHINA (Any other colour).—First, J. Stephens, Walsall, Staffordshire. Second, C. W. Brierley, Middleton, Manchester. Third, E. Tudman, Ash Grove, Whitchurch. Highly Commended, F. M. Shaw, Roughton, Rectory.

CREVE CEURE.—First and Second, Col. Stuart Wortley, Grove End Road, London. Highly Commended, Rev. C. Gilbert, Strampshaw Hall.

LA FLÛCHE.—First, Col. Stuart Wortley. Second, Rev. G. Gilbert. Highly Commended, Col. Stuart Wortley.

HOUDANS.—First, F. B. Beald, Whittemoor, Nottingham. Second, Rev. C. Gilbert.

SPANISH.—First, J. Thresh, Bradford. Second, H. Beldon, Goitstock, Bingley. Third, J. Walker, Wolverhampton. Highly Commended, — Brown, Lower Edmonton.

GAME (Black-breasted and other Reds).—First, W. Chnreh and J. W. Houlding, Nantwich. Second, S. Matthew, Stowmarket. Third, J. Wood, Wigan, Lancashire. Highly Commended, S. Matthew.

GAME (Any other colour).—First, S. Matthew. Second, W. Boyce, Beverley, Yorkshire. Third, F. Watson, Kelvedon. Highly Commended, C. Brierley, Middleton, Manchester.

HAMBURGERS (Golden-pencilled).—First, T. Wrigley, jun., Tonge, Middleton. Second, F. D. Mort, Stafford. Third, F. Pitta, jun., Newport. Highly Commended, F. Pitta, jun.

HAMBURGERS (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, jun., Earby.

HAMBURGERS (Golden-spangled).—First, H. Beldon. Second, N. Marlor, Denton, Manchester. Third, J. Roe, Hadfield, Derbyshire. Highly Commended, T. Walker, jun., Denton, Manchester.

HAMBURGERS (Silver-spangled).—First, H. Beldon. Second, H. Pickles, jun. Third, T. L. Fellows, Norwich. Highly Commended, Rev. C. H. Crosse, Cambridge.

BANTAMS (Golden and Silver Sebright).—Prize, H. Draycott.

GAME BANTAMS.—First, D. Canser, Erdington. Second, F. Pitta, jun. Highly Commended, E. S. Tiddeman, Brentwood.

BANTAMS (Any other Breed).—First, H. Beldon. Second, E. Pigeon, Lymington, Devon. Third, N. Marlor. Highly Commended, Sir E. Kerrison, Brome Hall.

TURKEYS.—First, J. Smith, Breder Hills. Second, E. Leach, Rochdale. Third, Lady M. Macdonald, Woolmer, Liphook, Hants. Fourth, T. Morton, Offord d'Arcey. Highly Commended, T. L. Fellows, Honingham.

GEES.—First and Third, Mrs. M. Seamons, Hartwell. Second, J. K. Fowler, Aylesbury. Fourth, Mrs. W. T. Brackenbury, Downham. Highly Commended, Rev. G. Hustler, Stillingfleet, York.

DECKA (Aylesbury).—First and Second, Mrs. M. Seamons. Third, J. Bowman & E. Fearon, Whitehaven, Cumberland. Highly Commended, Mrs. M. Seamons. Commended, J. K. Fowler.

DECKA (Rouen).—First, E. Tudman. Second, J. Gunson & S. Jefferson. Third, H. Dowsett, Pleshey, Chelmsford.

DECKA (Any other Breed).—First, S. Wyllie, East Moulsey, Kingston. Second and Highly Commended, E. W. Greene, Bury St. Edmunds.

JUDGES.—Mr. Hewitt, Mr. Trotter, and Mr. Bailly.

WOODHORN AND NEWBIGGIN POULTRY SHOW.

THE second annual Exhibition was held at Newbiggin-by-the-Sea, on the 5th and 6th inst. There were 163 pens of Poultry, and forty-four pens of Pigeons. The Show was a great improvement upon that held last year, the entries being more than double, and it bids fair to become one of the largest in the north of England.

The Committee experienced a rather serious loss through the unroofing of the large marquee in which the Show was held, but luckily without damage to a single bird, and, through the energy of the Committee, all was soon made quite safe. As will be seen on referring to the list of awards, Mr. Beldon was the most successful exhibitor of Poultry, and Mr. Yardley of Pigeons.

GAME (Duckwing).—First, H. Rodgers, Bedlington Colliery. Second, J. Harrison, Seaton Delaval Colliery.

GAME (Black-breasted and other Reds).—First, H. Beldon, Goitstock, Bingley, York. Second, M. Hall, Seghill Colliery. Highly Commended J. Curley, Bedlington Colliery.

GAME (Any variety).—Cock.—First and Cup, W. Bearpark, Ainderby Steeple, Northallerton. Second and Highly Commended, J. Brough, Carlisle.

HAMBURGERS (Golden-pencilled).—First and Cup, W. Wood, Sheffield. Second and Highly Commended, H. Beldon.

HAMBURGERS (Silver-pencilled).—First, H. Beldon. Second, R. Huntley, Bedlington. Highly Commended, H. Beldon.

HAMBURGERS (Golden-spangled).—First, H. Beldon. Second, J. Stalker, West Sleekburn, Morpeth. Highly Commended, H. Beldon; J. Achielclass, Barrington Colliery.

HAMBURGERS (Silver-spangled).—First, J. Howe, Cowpen, Northumberland. Second, H. Beldon. Highly Commended, S. C. Noble, Kendal.

DORKINGS (Coloured, except Silver-Grey).—First, D. Rutter, Hetton Lane Ends, Durham. Second, J. Graham, Witton-le-Wear, Durham.

DORKINGS (Silver-Grey).—Prize, Miss F. Wilson, Woodhorn Manor, Morpeth.

COCHIN-CHINA (Cinnamon and Buff).—First, H. Beldon. Second, J. Shorthose, Hartford Bridge, Morpeth.

COCHIN-CHINA (Any other variety).—First, H. Beldon. Second and Highly Commended, J. Shorthose.

SPANISH (Black).—First, H. Beldon. Second, W. Sanderson, Whalton, Morpeth. **Chickens.**—First and Cup, H. Beldon. Second, J. Dixon, North Seaton, Morpeth.

BRAMA POOTRA.—First, J. Shorthose. Second, H. Beldon. Commended J. Smith, Netherton, Morpeth; J. Shorthose.

POLISH.—First and Second, H. Beldon. Highly Commended, Miss E. Proctor, Hull; R. Parsons, Morpeth.

BARNDORF FOWL.—First, F. E. Schofield. Second, R. Cock, Stannington, Morpeth.

ANY OTHER VARIETY NOT MENTIONED, EXCEPT BANTAMS.—First, Col. Stuart Wortley, London (Crève Cœur). Second, J. Curley, Bedlington Colliery.

GAME BANTAMS (Black-breasted and other Reds).—First and Cup, G. Dowie, Netherton, Morpeth. Second, Master E. Crossland, Thorne's Lane, Wakefield.

GAME BANTAMS (Duckwing).—First, W. Mabon, jun, Castlegate, Jedburgh. Second, J. Sword, Jedburgh.

BANTAMS (Gold and Silver Sebright).—First, T. C. Harrison, Hull. Second, J. Robson, Morpeth.

BANTAMS (Any other variety).—First, H. Beldon (Pekin). Second, Messrs. S. & R. Ashton, Mottram, Cheshire (Black.)

GUINEA FOWLS.—Equal Prizes, T. C. Harrison; Miss Robinson, Stannington Moor, Morpeth; T. J. Harrison, Kendal.

TURKEYS.—Cock.—First, E. Leech, Greave, Rochdale. Second, Miss Wilson, Woodhorn Manor, Morpeth.

GEES.—First, R. Bell, High Thorn, Morpeth. Second, W. Rowell, Hirst, Woodhorn.

DECKA (Aylesbury).—First, E. Leech. Second, Messrs. Bowman and Fearon, Whitehaven.

DECKA (Rouen).—First, E. Leech. Second, J. Wilson, Woodhorn Manor, Morpeth.

DECKA (Any other variety).—First, T. C. Harrison. Second, R. S. Bainbridge, Woodhorn Grange, Morpeth.

PIGEONS.

CARRIERS.—First, H. Yardley, Market Hall, Birmingham. Second, T. Thompson, Wide Open, Northumberland.

TRUMPETERS.—First, H. Simpson, North Seaton. Second, T. Thompson.

ALMOND TUMBLERS.—First and Cup, H. Yardley. Second, T. Thompson.

OWLS.—Messrs. A. & B. D. Laycock, Woodville, Keighley. Second, H. Simpson.

POUTERS AND CROPPERS.—First, H. Yardley. Second, T. Thompson.

BARBS.—First, H. Cawood, Thorne, York. Second, H. Yardley.

FANTAILS.—First, H. Yardley. Second, T. Thompson.

TERRITS.—First, H. Simpson. Second, H. Yardley.

TRUMPETERS.—First, T. Thompson. Second, H. Simpson.

JACOBINS.—First and Second, T. W. Crozier, Woodhorn.

ANY OTHER VARIETY.—First and Second, H. Yardley.

The Judges were Mr. Benson, of Darlington; and Mr. Trotter, of Stocksfield-on-Tyne, for Poultry; and Mr. Shorthose, of Hartford, Bedlington, for Pigeons.

INTRUDING BEES.

I HAD a good hive of bees, and one day last week a swarm belonging to a neighbour of mine came and took a fancy to this very hive, the consequence was a pitched battle, in which hundreds were killed. The victors took possession of the hive, and next morning I was met by my neighbour, who said, "You have got a swarm of my bees, and if you won't give them up I will make you, or you shall pay me a guinea for them." Being a man of peace, I told my gardener to make all right with him, and to give up the hive. This my man positively refused to do, saying that it was just as likely that his bees were the dead ones as that ours were; and that the bees having come unasked into our full or partly full hive, we had no right to be taxed with costs in the matter. Rather, however, than be at any risk of unpleasantness, I insisted on the hive being given up to my neighbour, which was accordingly done. At the same time I think he was not altogether right, and shall feel greatly obliged if you can give me information as to what was really the "bee" law on this rather knotty point. He insists that his was a very strong hive, and, therefore, argues that my bees must have been killed in the combat.—A BEE-KEEPER IN DIFFICULTY.

[There is not any ground for doubting that under the circumstances you could not have been compelled to give up the bees, nor should we have done so. Payment of half the money value of the swarm would have been fair on both sides; and this only as a matter of courtesy, not as being legally due.

Yours being a good stock, it is not likely that either the invaders or the invaded were entirely destroyed, the probability being that a compromise was ultimately effected, and the stock benefited by an accession of numbers.]

INCUBATOR REGULATOR.

WHEN in London about the year 1851, I visited Cantelo's, in Leicester Square, and saw his incubator hatching chickens. The late Lord Berwick purchased one of the £20 incubators, and as I was somewhat curious in the matter, I was invited by his lordship to see it at work. During our conversation he told me that there was a great difficulty in keeping the heat regular, and when he was from home he had to leave the management to his housekeeper, and she did not pay attention to it, consequently he hatched but very few chickens. This apparatus was heated by a charcoal fire. I thought at the time that if it were heated by gas, the heat would be regular, and I made an incubator with alterations. When at work I found the gas was not to my expectations, it would vary in twenty-four hours from 30° to 40°. I thought of a governor that should be self-acting as regards the supply of gas, and after expending something like £10 in three years of experiments, I succeeded in making one that did not allow a variation of more than 3° or 4° in a week. It is now a very simple affair. During my experiments I spoiled at least three hundred eggs. In my last trial I only set twelve eggs; out of these I hatched seven fine chicks, which grew up and did well; since then I have done nothing with it. His lordship dying, I could not bring it to his notice. It could be applied to a charcoal fire on Cantelo's system, but not to oil, and such like. If any correspondent is open to take the matter up and register or patent the apparatus, I shall be glad to correspond with him.—W. S., *Shrewsbury*.

INVENTION OF THE BAR-AND-FRAME HIVE.

A CORRESPONDENT, signing himself "SUDBURY," in your number of THE COTTAGE GARDENER of June 20th, stated that the invention of the "bar-and-frame" hive was due to an Englishman, and that it was not of American or German origin. Your note at the foot, however, leaves the question in an uncertain condition, although you allude to the "validity of the patent in America having been disputed unavailingly because of Major Munn's pamphlet on the "bar-and-frame" hive in 1844. If so, the Englishman has it, and America is not the first in the field. But you go on to say that you endorse the decision arrived at by the trans-Atlantic law courts, and give the credit to the Baron von Berlepsch in Germany and the Rev. L. L. Langstroth in America for the invention. Thus, then, you destroy the high repute of the "book hive" of Huber, who certainly has the credit of the early German invention.

Can you mention the date of the more practical and convenient "bar-and-frame" hive of the Baron von Berlepsch, which seems to supersede those of Major Munn and Mr. Woodbury, and when the latter first introduced his superior rectangular frame hives with the straw cases?

The question of first principles will, I think, be better explained and understood when we have these data to go upon.—WAX.

[The question is one not of date but of identity. Major Munn's hive was, undoubtedly, invented before Mr. Langstroth's, and Huber's leaf hive preceded the frame hive of the Baron von Berlepsch by more than half a century. Major Munn's three-cornered frames were, however, hinged to the hive and were not interchangeable, whilst Huber's frames were interchangeable, but had no outside case. As to how far Mr. Langstroth and the Baron von Berlepsch may be deemed the inventors of modern frame hives admits, of course, of a difference of opinion. We have stated ours, and others are at perfect liberty to enjoy their own; but in what respect we have destroyed or even assailed the reputation of Huber's "book hive" by stating that the principle of the frame hive was first developed in it, and that it needs only an outside case to render it nearly identical with the German frame hives of the present day, we are utterly unable to discover.]

JOLLY BEE DOINGS IN BUCKINGHAMSHIRE.

A few jottings about bees. In April, 1865, I had a six-inch glass filled. Now, let us pass on to the spring of 1866. What now? Poor prospect—four stocks; two strong, two very weak,

which I had to feed up until the 17th of May, when one lot only weighed 5 lbs.—hive and what was inside. I found no honey stored until the 18th. I weighed again on the 21st, and, to my surprise, the five-pound lot had gained other 5 lbs., which made it up to 10 lbs. They did well, and swarmed in three weeks. Do not let us despise weak things.

May 23rd. How they sing! Wife, you must have your eyes about you. Off comes the first swarm with a queen at its head—a position which she had never occupied before; but the result is a credit to her now, for I found on weighing the bees that she had brought 5 lbs. of bees out with her, and in about a fortnight I had a cast which weighed 3 lbs., from the same stock. The weights of my swarms are as follows:—First swarm, 5 lbs.; second swarm, 3½ lbs.; third swarm, 3 lbs.; fourth swarm, 3 lbs.; first cast, 3 lbs.; second cast, 2½ lbs.; third and fourth casts, 2 lbs. each, which I added together. The second cast returned home after hiving. They rose twice more and returned, and I found two queens under the old stock on each of their returns, making six queens lost from one stock, after which they made themselves happy at home, and went to work like Britons. So you will see that I got six new lots of bees, and also 53 lbs. of honey taken in supers; therefore, I will not grunt over 1866, for that left me with ten stocks of bees.

But 1867—Oh! dear. What a spring! Bees a-starving. But you must stop until another time before I can tell you all about it.—A BUCKS BEE-KEEPER.

OUR LETTER BOX.

POULTRY MAGAZINE (*Speculator*).—We know nothing of the proposal beyond the advertisement. "The Poultry Chronicle" was ably conducted but an expensive failure; we purchased the copyright, and fear we should be asked to do the same for any similar periodical.

TURKEYS ROUPE (*J. Light*).—The sneezing, stoppage of nostrils, and other symptoms indicate that the young Turkeys have the roup. Omit the rice and greaves; feed only on barleymeal and bread soaked in ale, and give each 1 grain of powdered sulphate of copper daily. Separate those affected from those which are healthy.

PLEAS IN POULTRY-HOUSE (*H.*).—We have always found that thorough lime-whiting was a thorough cure, and we never adopt any other method for getting rid of our enemies. We are happy to say, we are not now troubled with them. When fowls have the opportunity of dusting, and the material for enjoying it, there is little danger of vermin. We use road grit largely in making the floors of our poultry-houses, and supply the fowls' runs with heaps of it. In these they busk all day, and when they do so they have no parasites. We fancy these are appliances you have not adopted. We advise you to do so, and to thoroughly lime-white the whole of your houses, not with a sticky whitewash, but with lime slioply slaked with water to the consistence of cream. Every hole and corner should be thoroughly washed out with it, and while the fowls are absent from the house it is well to place three or four small heaps of lime and to slake them on the floor, shutting doors and windows. Fowls should be kept scrupulously clean. There is no doubt that where their excrement is permitted to lie about it engenders vermin.

BUCKWHEAT AS POULTRY FOOD (*W. F.*).—Buckwheat meal is largely used in France in fattening poultry, being a favourite food with our neighbors. It is not much thought of in England. We use it only for fancy Ducks. We should not give it to chickens, as from its oily and fattening properties it is injurious to the growth of feathers. We believe there is no known food so good as ground oats as they are ground in Sussex. The whole of the corn is ground together till it all mixes with water & flour. Nothing whatever is taken from it in shape of bran, &c. The Sussex fowls are the best in the world. The breed of them is Dorking, but the food is exclusively ground oats.

FLOORING OF PIGSTY AND FOWL-HOUSE (*A Recent Subscriber*).—Gastar and road drift would not form a hard flooring. Lime rubbish is required to make the asphaltic flooring, and we have repeatedly published the recipe for making it. No such flooring is desirable for a fowl-house. Road drift or sand alone is desirable. The surface to be raked every morning.

PRESERVING SPARE COMBS (*Disappointment*).—Wrap each comb separately in paper, and put them away carefully in a clean and dry drawer or box.

UNITING WEAK STOCKS (*Novice*).—To resort to fumigation after having succeeded in driving is so retrograde a step that we hope you will think better of it, as we believe that the former inflicts permanent injury on all bees that are subjected to it. Fumigation is best performed in the evening when all the bees are at home. There is no more necessity for removing the superfluous queen after fumigation than there is when effecting unions by driving.

CAT'S HAIR FALLING OFF (*C. A. J.*).—A small teaspoonful of sulphur daily for a week may arrest the falling off of the hair, but we could not advise confidently without seeing the animal.

POULTRY MARKET.—JULY 17.

SULTAN, Viceroy, and Belgians have caused an increased consumption of poultry without adding to the supply. The consequence has been a rise in prices for a few days only.

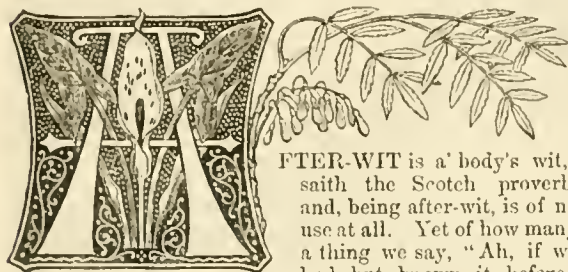
	s.	d.	s.	d.		s.	d.	s.	d.
Large Fowls.....	3	6	4	0	Pheasants	0	0	0	0
Smaller do.....	2	6	3	0	Partridges	0	0	0	0
Chickens	1	9	2	0	Grouse	0	0	0	0
Geese	6	0	6	6	Guinea Fowls.....	0	0	0	0
Ducks	3	0	3	6	Rabbits	1	5	1	6
Pigeons	0	9	0	10	Wild do.....	0	8	0	9

WEEKLY CALENDAR.

Day of Month.	Day of Week.	JULY 25—31, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
25	Th	Twilight ends 11.20 P.M.	71.1	49.4	61.7	12	15	44	58	47	morn.	83	41	1	24	6 13	206
26	F		73.9	50.2	62.4	19	16	4	57	7	1	40	52	2	25	6 11	207
27	S	Royal Horticultural Society, Promenade	75.0	51.0	63.0	17	17	4	55	7	41	0	3	4	26	6 14	208
28	SUN	6 SUNDAY AFTER TRINITY. [4 P.M.]	76.3	51.0	63.6	19	19	4	54	7	29	1	10	5	27	6 13	209
29	M		76.1	53.6	63.3	17	20	4	52	7	26	2	9	6	23	6 12	210
30	Tu	Backingham Horticultural Show.	75.3	50.3	62.8	16	21	4	51	7	34	3	59	6	29	6 10	211
31	W		75.1	50.5	62.8	15	23	4	49	7	49	4	42	7	●	6 8	212

From observations taken near London during the last forty years, the average day temperature of the week is 75.1°; and its night temperature 50.4°. The greatest heat was 92°, on the 25th, 1844; and the lowest cold 32°, on the 23rd, 1862. The greatest fall of rain was 1.39 inch.

PAROCHIAL HARVEST FESTIVALS AND HORTICULTURAL SHOWS.



AFTER-WIT is a body's wit," said the Scotch proverb, and, being after-wit, is of no use at all. Yet of how many a thing we say, "Ah, if we had but known it before!

What a pity we did not think of it in time!" Thus, suppose a large party is to be given; the ladies of the house hold solemn conclaves upon it, they talk about it, they give hints to each other, they dream about it, they consult paterfamilias so frequently—at least, not consult—they talk at him about it if he has ventured an idea contrary to theirs, until he gets up and fidgets, and rubs his bald head (all bald men do), and walks about the room whenever the coming party is mentioned, and perhaps vents a "Bother it! you have got me into this scrape, and you may get me out of it. In my young days a bit of fish and a bit of beef, and tart, and custard, and cheese, did well enough; but the world's grown so grand now!" And having said this, the worthy man feels relieved, and yields to anything.

Well, the party is over, and went off satisfactorily; but during the whole of the following week there are darted out at intervals such observations as these—"Oh, but if we had but thought of that, how charming the table would have looked!" Or, "I have just now, dear, thought of the very thing we ought to have had to complete the sweet course!" But this "after-wit" is of no use. Now the harvest is yet far from ripe, and the Apples, and Pears, and Plums, and Grapes (happy those who have any!) are yet wee, wee things; so that when I write about harvest festivals, as I now do, I am speaking in good time, and before any arrangements have been made, being careful that my wit shall not be after-wit.

Harvest festivals have become very general in the last few years in Wilts, and surely no festivals can be more suitable; but what I wish to impress upon our clerical readers, their wives, and their daughters, is that a *parochial horticultural show may be beneficially combined with a harvest festival*. Let me describe one such festival and show at which I was present and took part, and thus allow me to recommend for adoption what has been tried and found to succeed.

There is a village not very far from me which is a very pretty village, chiefly from its possessing what is now rare, a village green; and by a village green I mean a central space round which the houses are dotted—not in rows streetwise, but some houses standing fair and fronting the green with pretty gardens, then some with gable ends to the green, and then cottages slipping away obliquely; and these fashions repeated over and over again, until there re-

mains a sort of oblong bit of grass surrounded by houses placed as if by chance, with nothing whatever formal in their arrangement. Such is the green of the village to which I refer. Then the green has the church lying in one quiet corner, and the village school rather far off: this is well, for I like not the noise of children's voices to be too near the graveyard. And then in another quiet spot is the parsonage, with a wall in front—a low wall: this, too, is well, for I like not any lines of harsh separation in villages, but that the inhabitants should look and feel to be one family. Certainly this village green is perfection. There the little children tumble about in the sunshine; there the big babies are carried by their staggering and scarce bigger sisters; there the noisy youngsters play their juvenile games; and there the youths and young men play cricket, and old men on one stick or two totter on and sun themselves, and old women stop, and talk, and talk away; and there we sometimes see little children, all importance, walking across "to shop" for mother, or to post a letter to uncle Thomas in New Zealand. A village to my mind can never be perfect unless it has its green. I dislike villages whose formal street looks like the worst part of a town left there by mistake.

Well, I was invited to the harvest festival and horticultural show in the village which I have endeavoured to describe. We assembled at the vicarage at two o'clock. The vicar, good man, was not there—he was superintending in the schoolroom; but of what he there superintended more hereafter. Soon the church bell was heard, and we wended our way towards the building whence the sound proceeded. And then mark the advantage of a village green, and what a pleasant feature it is! You could see from all parts the people beginning to go forth from their homes, locking their doors, shutting their garden gates, and a village crowd gradually gathering. The school children were being marched in order; the teachers fussy and anxious, as all teachers are, lest the ranks should be broken. We reached the churchyard gate—a rustic gate; and here let me pause and say a word about this God's-acre, and God's house within it.

The church was built but a few years ago—ten or a dozen, and has no aisles—merely a nave, and chancel, and vestry, with a bell-turret on its west end; and yet it is very pretty, and is becoming weather-stained, which takes off the new look and tones down the colour. But the feature I especially like is one in the churchyard, for around it is a broad border between the sunk fence and the portion for interment. This is not only planted with shrubs, but is also gay—no, I will rather say lively, with flowers, herbaceous flowers chiefly, but some annuals, and even bedding plants. As I have passed by it year after year there has always been colour from early spring to late autumn. This is a very pretty feature, this encircling border full of flower-life, and seems to my mind like a kind living hand taking care of the deceased within. But while I am gazing the bell is beginning to show signs of stopping, and so I hurry on. I pass the wooden porch up which flowers are carefully trained, and I enter the neat solemn building. It is a mistake to think that a church must

needs be old to be church-like and to affect the mind as a church ought, making one instinctively feel that it is a church. True it is that we may prefer an ancient building well restored, where—

"An heraldic shield,
Varying its tincture with the changeful light,
Imbues the altar window. Fixed aloft
A faded hatchment hangs, and one by time
Yet undiscoloured; and on the floor beneath
Sepulchral stones appear, with emblems graven,
And foot-worn epitaphs, and some with small
And shining effigies of brass inlaid."

Such a church we may prefer; but so well is church architecture understood, that many a new and inexpensive building conveys to the mind church-like feelings.

As I entered this village church on this harvest festival there lay, leaning against the communion rails, a goodly sheaf of wheat. Surely none could object to a decoration so simple yet expressive. Suitable psalms and lessons were read, and hymns sung; and I ascended the pulpit to give a brief and, I hope, not unsuitable address. More of heart seemed in the service than on ordinary occasions; perhaps that sheaf of wheat, that silent reminder of thankfulness due, had something to do with it. The harvest service over, we partly recrossed the green to reach the schoolroom, exchanging greetings, meeting, of course, that cantankerous individual (life is never wholly smooth), "who saw no good in these sort of things; it made poor folks idle—and—and—and——." But no more of him. As said a good-natured man, "it takes all sorts to make a world;" so we will put one sort against another, and be comforted.

The schoolroom door is at length opened, and we find the interior transformed into a horticultural show. The sloping desks, their slope reversed and all joined together, formed a sloping counter, which was covered with white calico; upon this stood, each prevented slipping forward by a couple of slender nails, numerous plates of Apples, Pears, Plums, Peaches, Grapes, and other fruits. Grand old-fashioned china were some of the plates, taken out of snug cupboard for the day. There were floral devices in other parts of the room. On a side table stood a cottage, and garden, and arbour, neatly made to imitate reality, the work of a maid servant. Then, of course, there were gouty-looking Vegetable Marrows, green caterpillar-like Cucumbers, plates of Potatoes cooked and uncooked. In the class-room were the farm roots, and the less ornamental vegetables. Texts in flowers decorated the walls of the schoolroom, and a floral crown was suspended from the ceiling.

Wisely, so I think, no prizes were given. A village is so small a place, people such close neighbours, tittle-tattle so rife, that there might easily be heartburnings, disputes, tiffs, huffs, and even grave quarrels. As it was, everybody seemed convinced he or she deserved to have had the first prize. How fondly and proudly, not "UPWARDS AND ONWARDS" more so, did John hang over his plate of Potatoes! How pleased Mary was with her dish of Grapes! And Mary's Mary, little Poll, eyed with infinite gratification a plate of Apples off her own tree, which father had grafted. Bless the folks, they seemed very happy, and reconciled with pleasurable self-satisfaction any little supposed inferiority, thus—"If Thomas's be the biggest bunch, mine has the biggest berries;" or, "William's (Wiltshire for William's) Pears be bigger nor mine, but hisn eat like taties, but mine melt in the mouth like butter."

So each seemed satisfied, and each in thought had a first prize. Much pleasure, too, seemed to have been caused by the vicar having written in his good round hand (clergymen write better than they formerly did, it is a poor vanity to be proud of writing badly), each one's name, and the name of the fruit; but whether Dr. Hogg would have said in all cases it was the right name I much doubt, for on the card was often merely a local name. The crowd entered at one door, passed through slowly, and out at the opposite door, so that there was no crushing from people meeting, no confusion and tearing of skirts, or a thin man sandwiched between two fat ones.

This horticultural show was, of course, strictly parochial: in that consisted a great excellence. In due time, as the evening came on, there was a public tea in the open air, not formal, but each one, or each group of friends, took tea, and then walked again into the schoolroom. The vicar broke up the party early, so that good order might not be disturbed, and all might be at their homes by daylight. Such was this Parochial Harvest Festival and Horticultural Show. I have put an account of it

on paper, believing that it is a copy worthy of general imitation.—WILTSHIRE RECTOR.

JUDGING GRAPES.

ANY one who is in the habit of attending our great horticultural exhibitions, and is at all interested in the culture of Grapes, must have very frequently observed what Mr. Thomson complains of in the last number of *THE JOURNAL OF HORTICULTURE*—the want of "some fixed principles to guide judges when deciding on the merits of Grapes." We are certainly very much in want of some fixed and generally recognised standard to guide judges and competitors, so that there may be less chance and more certainty in the judging and selection of fruit for exhibition purposes.

I quite agree with what Mr. Thomson says about fine flavour not being always associated with high colour and fine bloom. It not unfrequently happens that the reverse is the case, not only with Black Hamburgs, but also with Muscats and other varieties, where I have frequently observed high colour without fine flavour, and fine flavour without high colour. In my experience this has been the exception, not the rule; it nevertheless points out the necessity of all judges tasting Grapes before deciding on their merits, and not taking it for granted that because they are well coloured they will be well flavoured.

It is well known that some varieties, remarkable for their fine colour and bloom, are not high flavoured—such as the Black Prince, and amongst Hamburgs the Dutch Hamburg, which is often shown by exhibitors for the Black Hamburg, and difficult without tasting to distinguish from it. The Dutch Hamburg produces a very large berry, and generally colours well; indeed, when well grown, it is one of the finest-looking varieties of Hamburg in cultivation. I have it at present growing with berries nearly as large as Orleans Plums, and the colour all that could be desired. In the same house there is growing a Vine of the Victoria Hamburg with equally large berries, but not so highly coloured, the bunches being somewhat larger than those of the Dutch Hamburg. Were the Dutch Hamburg placed on an exhibition table against the Victoria Hamburg, according to the prevalent mode of judging the high colour of the Dutch Hamburg would secure for it the award of the judges. Were they placed on any nobleman or gentleman's table the award would assuredly be given in favour of the Victoria Hamburg, its delicate flesh and fine flavour at once counterbalancing the finer appearance of the Dutch Hamburg, which, however well finished, is but a coarse-fleshed and inferior-flavoured variety of Hamburg.

Although long of opinion that too much weight has been given by judges to colour, and too little to flavour, still I think that a large allowance should always be made where colour exists in a high degree, and is associated with fine flavour; but without this requisite quality I consider no award should ever be made by judges, however pleasing and attractive the appearance of the Grapes may be on an exhibition table, because without flavour they are unpalatable, and, consequently, unfit for the purpose for which they are grown.—ARCHIBALD FOWLER, *Castle Kennedy, Stranraer*.

STRAWBERRIES—POTATOES.

ECLIPSE, Wonderful, Princess Alice, Marguerite, Sir Joseph Paxton, Premier, President, are all inferior in flavour to Ingram's Prince of Wales. This variety is so hardy and so fruitful, so juicy, and has such a pleasing flavour, that I value it above all those I have mentioned.

Mr. Tottie's gardener, a good fruitist, was here the other day; he pronounced Prince of Wales, La Constante, and British Queen the best three varieties for general purposes, and he is right. La Constante gives me an excellent crop; not so good as last year, but very fair considering all things. British Queen is very healthy, and shows its exceeding hardiness by looking nearly as well as last year. The crop is light, not because the plant failed to flower, but the frost or cutting winds killed two-thirds of the flowers. La Constante also suffered from the same cause.

Crimson Queen was badly cut up, but is giving an excellent crop. Frogmore Late Pine shows tenderness, and has suffered more than any other sort. John Powell is very good, but not equal to British Queen. Dr. Hogg is most excellent, with a pleasing Pine flavour. I intend to increase this variety all I can. Souvenir de la Kieff is hardy, and a stronger grower than La Constante, from which it was raised. It is later than

this last variety, and is not ripe yet (July 16th), so I cannot speak as to its flavour.

I have heard some were disappointed that Lord Clyde Strawberry, raised by Mr. Dean, of Bradford, did not prove to be so good as he expected. I only wish his customers could see the plants he gave me. They are loaded with fine fruit. It is a very hardy, free-bearing variety, and the flavour of the fruit is most delicious. It is superior to many of the new sorts which have been highly praised.

I still recommend the following sorts for general planting:—1, Keena's Seedling; 2, Prince of Wales (Ingram's), the best for preserving; 3, British Queen; 4, La Constante. Where the British Queen does not flourish I should advise John Powell being tried.

Dr. Hogg will, I hope, prove to be the best late Strawberry; and if any other variety is desired, I commend Lord Clyde before all others. I have not tried Cockscumb, which Mr. Radeleyffe so strongly recommends.

My Potatoes are looking well. Rivers's Royal Ashleaf justifies this year again all I have said in its praise. I have one or two new sorts planted this year, Bradford Seedling being one. I have not looked to see what sort of crop I am likely to have of it; I can only say the tops look healthy and strong. I am growing the Ashtop Fluke this year, and like the appearance of the plant much.—C. MARSDEN, *Gargrave Vicarage, Leeds.*

YUCCAS, AND THEIR CULTURE.

I HAVE great pleasure in seconding all that Mr. McDonald has said at page 26 in favour of the Yuccas, with some slight exception; at the same time I advocate the claims of these plants quite as much as he can desire, and possibly for purposes different from those which he has set forth. As the fashion of the day is favourable to the cultivation of plants presenting great dissimilarity in character and outline, the Yuccas now receive a share of that attention to which they are entitled, but which has not in all cases been accorded to them, perhaps in some instances owing to their being less rapidly increased than most plants, as well as from an idea that their hardiness is questionable. Although they cannot be propagated so rapidly as many of the soft-wooded summer occupants of our flower gardens, still the process is more easy than many suppose. The small amount of care required in their cultivation also gives them an additional claim to be more generally grown than they now are.

Of the Yuccas in most general estimation, those with which I am best acquainted are *Y. gloriosa*, *aloifolia*, and *recurva*, which, either in themselves or in some of their intermediate varieties, seem to run into each other in a way that makes it difficult to determine to which of these species certain plants are to be referred—at least, such is the case with those here, and their number is very considerable. *Yucca filamentosa* is, however, widely different, while in its variegated form it has not yet become sufficiently plentiful to be planted out of doors in such numbers as to make that show which no doubt it will do in course of time. I am not sure that it can be increased to such an extent as some of the larger-growing kinds first mentioned, and we must at present regard it more as a house than an out-door plant.

I am disposed to differ from my friend Mr. McDonald, who recommends for Yuccas a good rich soil, for although I have no doubt that the plants will flourish in such for a time, I am far from sanguine that it is the most proper; and as we have been pretty successful with them here, having sometimes had a dozen or more plants in flower at a time, and some of them 10 feet high, the soil and situation may be regarded as not being far wrong, and these may be described in a few words.

At the base of a terrace wall, about 10 feet high and facing the south, a border, 10 feet wide and some 200 feet long, was planted many years ago with the varieties of Yucca mentioned in the beginning of this article, intermixed with a few *Frieses*, more especially towards the front of the border. The wall itself, I may state, is covered with such plants as *Ceanothus*, *Eugenia*, *Myrtles*, *New Zealand Veronics*, *Escallonia macrantha*, and several kinds of climbers not unusually met with on conservatory walls, although no protection is given. The border is planted irregularly with Yuccas, some of the plants being upwards of twenty years old, but the greater portion much less, as by various mishaps, as well as by occasionally heading-down, the number and size of the old plants has been limited. The border, however, is tolerably well covered, and where a cluster is formed by plants growing near each other, the

intruder will find that the sharp points of the leaves penetrate ordinary clothing more than is agreeable.

The position is one facing the south, and this circumstance has done no harm beyond inducing a larger number of plants to push forth their flower-spikes later in the autumn than there is mild open weather to complete their opening. This, however, was no doubt also in a measure due to the character of the soil they grow in, which, instead of being a rich loam, is one that would be considered of very inferior quality for kitchen-garden purposes. It may be roughly described as consisting of three-fourths stones, the remainder being a yellow sandy loam, not of itself so porous as an ordinary sandy or gravelly soil; but in conjunction with the stones it is open enough for any plant requiring a porous soil. Most of the material composing this border was the subsoil obtained from an excavation, and some alterations rendering it necessary to raise the border about a foot ten years ago, this soil was used for the purpose, and has answered well. The plants which seem to thrive in it are most of the *Cypresses*, *Arbor Vita*, and common *Laurels*. *Rhododendrons* and kindred plants will barely live, and *Lily of the Valley* drags out a miserable existence. Not having had experience with Yuccas in soil of a contrary description, I cannot be positive they will not succeed in such, but I can confirm Mr. McDonald's remarks as to the necessity of deep soil; for in that where the plantation referred to is growing, the roots of some *Pinuses* have been found several feet below the surface, although the ground had never been disturbed beyond the usual spade's depth. The presence of so many stones allows a more ready passage of the roots downwards than the hard obstinate clay bottom of many soils; and plants whose roots penetrate to so great a depth rarely suffer for want of moisture.

Amongst the positions suitable for Yuccas, I can hardly coincide with Mr. McDonald in advising their being planted on rockwork, unless the latter is on rather an extensive scale, as they attain too large a size for those tiny imitations so often met with; but where natural rock, or artificial rockwork on a sufficiently extensive scale exists, there the Yuccas may have a place.

There are, however, so many positions in which Yuccas may be planted, that it is not difficult to find a suitable one. As corner plants in a geometrical garden, they are always acceptable, their outline and symmetry giving them a decided advantage over most other plants. Dotted about on the turf they look well, more especially if the plants are large. One which is thus planted here, has a stem 7 feet high to the first tier of leaves, but the head has latterly become much injured. Other positions might be cited as suitable to Yuccas, but do not plant too close to walks, on account of the sharp-pointed leaves. Perhaps the best mode of planting is in a border by themselves, or along with kindred plants, for their tropical aspect commands more attention when they are in number; and when such a border is well chosen, and its occupants appear to be at home in it, few will be disposed to find fault with them, or recommend a change.

The Yuccas increase but slowly, but where an old plant exists, it may be multiplied to a greater extent than may be supposed. Where a number of plants of various sizes exist, it sometimes happens that a leggy one is broken by a heavy load of snow in winter, or in some other way; in this case it is best to leave the stump in the ground, remove the head, and if the latter is put in as a cutting, it will very probably grow, while a numerous tuft of young shoots will be formed on the short stem that is left in the ground. In general, these should remain till the following spring, when a considerable number of them may be cut off along with a little heel of the old stem, and put in as cuttings in some place not too much shaded, as they will have to stand a year or more, perhaps, without being removed. Of course, plenty of sand is necessary, and if extremely hot weather follow, afford shade accordingly; but I have put such cuttings in about August without any attention, and they have made good plants. The aid of glass will expedite the rooting process, but I question much if heat is wanted in any way. The Yuccas are at all times slow-growing, and their propagation cannot be so quick as that of many other plants; but as they require very little attention, and a cut-down old plant affords a goodly number of cuttings, somewhat like *Pine Apple* crowns, or small suckers, they may be had in greater numbers than hitherto if the demand should increase.

With regard to the hardness of the plants, I have never seen our most severe winter have the least effect on them; but heavy falls of snow sometimes load the tops so much that these break off, or where a plant has two or three heads, one of them

may be split off. A mild winter is, however, serviceable in one respect, as the plants disposed to bloom do so earlier than when the winter is severe, for the Yuccas seem to bloom indiscriminately at all times of the year, when the weather is open. I have had several in full bloom in December, but more frequently a number of plants are just rising into bloom at that time, and are cut off by the hard weather that may not set in till after Christmas; a fine autumn, unfortunately, starting such plants into flower at that unfavourable period. Hot, dry seasons are most favourable to the plants' blooming; the dry summers of 1858 and 1859 were especially propitious. Those who have not seen *Yucca gloriosa* with a full-grown spike of flowers, have certainly not seen one of the noblest of all flowering plants, for the beauty of the spike is not less remarkable than its weight, and altogether the tropical aspect of the plant gives it an importance entitling it to a more extended cultivation than it has yet received.—J. ROBSON.

VIOLA CORNUTA DYING OFF—VIOLA LUTEA AS A BEDDING PLANT.

A CORRESPONDENT writing from Audley End, Saffron Walden, wishes to know if any of the readers of *THE JOURNAL OF HORTICULTURE* have lost their plants of *Viola cornuta*. It appears by his letter, that early last spring he planted eight beds of *Viola cornuta*, which did very well until a few weeks ago. Lately, it appears, the plants have been dying off in patches, so much so that he is afraid of losing them all.

Singularly enough, the very same evil has happened in the case of the plants which Mr. Bennett was good enough to send me from Osberton Hall. They were planted with just the same care as my own variety of *Viola cornuta*, and only a walk divided the two rows. They were planted on the same day, and the same amount of care was bestowed on each. My instructions at the time of planting were—Let there be no difference in the quantity of leaf soil placed beneath each row, as I wish Mr. Bennett's variety to be placed under precisely the same conditions as my own. My instructions were faithfully carried out. At the present time *Viola cornuta* Mauve Queen forms a perfect sheet of bloom, not a single plant having failed in the row 50 yards long; but on the other side of the walk the case is very different, in the whole row not a single plant has done well; they have been constantly dying off, just in the same manner as those at Audley End. I have watered the beds with manure water, and, as a last resource, yesterday (July 18th), I had the ground sprinkled over with guano between the plants. At present they have a very sorry appearance.

In making the above statement, I trust that Mr. Bennett will not think I wish to depreciate his variety. I saw it planted out at the Royal Botanic Gardens, Kew, on the 19th of May, and was very much pleased with its appearance at that time. I considered it well worthy of the name which I suggested for it—*Purple Queen*; for the flowers were to all intents a beautiful purple. Should this meet the eye of Mr. Smith, the Curator, it would be very interesting if he would favour the readers of the *Journal*, by reporting the present condition of the plant, and whether it has suffered the same fate as at Audley End (I presume that it is the *Purple Queen* variety which is there grown); also, whether Wills's variety is not perfectly different from *Purple Queen* in every feature—namely, profusion of flower, colour, habit, and freedom of growth. I noticed in the Royal Horticultural Society's gardens, South Kensington, on the 2nd of this month, both Mr. Bennett's variety and my own, and the difference indicated above could be plainly seen by any casual observer. I sent Mr. Bennett some plants of my variety, and have little doubt that he also has found out the difference. It would be exceedingly interesting if he would give his opinion, for I am sure both Mr. Bennett and myself are anxious to provide the gardening public with the fullest information we possess as to the relative merits of the two *Violas*, or, indeed, any other valuable decorative plant. I enclose flowers of each variety, by which the Editors of *THE JOURNAL OF HORTICULTURE* will at once see that there is a decided difference in the colour, size, and shape of the flower. The upper petals of Mr. Bennett's variety are very much narrower than those of mine, so also are the lower petals. The habit of Mr. Bennett's variety is more procumbent, and the edges of the leaves are more serrated.

As I have before stated, I have watched the growth of *Viola cornuta* in extremely hot and dry seasons, and in soils as widely different as possible, yet the effect has been precisely the same.

In a letter which I have this week received from my friend, Mr. Muir, at Oulton Park, he tells me how beautiful *Viola cornuta* is there again this season; he says a six-inch band has spread to 18 inches, and is a perfect sheet of bloom.

Will Mr. Drewett say how it is doing with him at the Denbies this season? Last year he gave me credit for having re-introduced to our gardens one of the most chaste and beautiful plants for bedding purposes. I hope he will state whether or no he still maintains the same opinion of it.

I must not forget to remark how beautiful *Viola lutea* is with me now. It grows much more freely than it did last year; the habit is all that could be desired, being very dwarf and compact; and the foliage is of a bright glossy green. The plant does not grow more than 4 inches high, and flowers most profusely throughout the season. It seeds very freely, and reproduces itself true from seed. This is not always the case with *Viola cornuta* if the seed is collected indiscriminately, but if gathered from one plant only the produce does not vary so much. I predict a brilliant future for *Viola lutea*, it is certainly the best yellow dwarf edging plant I have ever seen; it is perfectly hardy. Those who may wish to grow it in quantity should at once order it, and begin propagating it. Messrs. J. Carter & Co., I believe, have secured the principal stock of it from Mr. Tyerman. I should be glad if the correspondent at Audley End would send me, properly packed, and with flowers on, a small piece of the kind which he grows, so that I may see if it is Mr. Bennett's or my variety.—J. WILLS.

ROYAL HORTICULTURAL SOCIETY'S EXHIBITION AT BURY ST. EDMUNDS.—JULY 16.

The following is in continuation of our report of last week:—

In the class for miscellaneous cut Roses, a fine stand of seventy-two varieties was shown by Mr. B. R. Cant, of Colchester. It contained some glorious blooms of H.P.'s *Madame Vidot*, *François Louvat*, *Madame Victor Verdier*, *Le Rhone*, extra fine; *Alfred Colomb*, *Senateur Vaisse*, *Duc de Wellington*, *Madame Clemence Joigneaux*, *Xavier Olibo*, *Comtesse de Paris*, *Maurence Bernardin*, and *Anna de Diebach*. The following Tea Roses were also very fine—*Madame Willermoz*, *Souvenir d'un Ami*, *Niphetos*, *President*, *Devoniensis*, and *Madame Bravy*. Messrs. Lee were second.

The silver cup given by the gardeners of Suffolk for the best twelve cut Roses grown by a Suffolk gardener, was awarded to Mr. W. Nichol, gardener to J. H. Powell, Esq., Drinkstone Park, Bury St. Edmunds. The flowers were all young and fresh, and of good quality. The sorts were *Duc de Rohan*, *Princess of Wales*, *Maurence Bernardin*, *Maréchal Vaillant*, *Lord Macaulay*, *Jean Gonjen*, *Charles Lefebvre*, *La Ville de St. Denis*, *Madame Crapelet*, *John Hopper*, *Cloth of Gold*, and *Maréchal Niel*. Mr. Keen, gardener to J. G. Sheppard, Esq., Campsey Ash, was second.

Twenty-four varieties were finely shown by Mr. W. Ingle, gardener to C. G. Round, Esq., Birch Hall, Colchester; R. B. Postans, Esq., of Brentwood, being second. In the class for forty-eight varieties, that veteran Rose grower, Mr. J. T. Hedge, Reed Hall, Colchester, was first with a good stand of blooms, among which were *Madame Victor Verdier*, *Beauty of Waltham*, *Duc de Wellington*, *Souvenir de Comte Cavour*, *Madame Boll*, *Souvenir de Maréchal Serrurier*, *Gloire de Santenay*, *Madame Charles Crapelet*, *Duchesse de Morny*, and *Marie Baumann*. Forty-eight varieties from Mr. B. R. Cant contained some of the finest flowers that have been shown this season. *Duchesse de Morny*, *Marie Baumann*, *Madame Victor Verdier*, *Beauty of Waltham*, *Comtesse de Paris*, *Charles Lefebvre*, *Pierre Notting*, *Niphetos*, *Devoniensis*, *Madame Caillat*, *La Brillante*, and *Madame Rousset*, were very fine indeed. Messrs. J. & C. Lee were second, having some good blooms.

In the Amateurs' class for twelve *Scarlet Pelargoniums*, Mr. Ferman, who was first, had good plants, among which the following were conspicuous:—*The Clipper*, *Culford Rose*, *Rose Rendatler*. Dr. Lindley, *Madame Rudersdorff*, and *Rose Perfection*. Mr. D. T. Fish was second with well-grown plants, but over-trained; and Mr. P. Grieve third.

In the Nurserymen's class for the same, Mr. John Barrett, Cotton Lane Nursery, Bury St. Edmunds, was first with some capital plants, remarkably well flowered. Mr. J. J. Chater was second with plants much inferior to the foregoing. An interesting class in this section was one of six *Pelargoniums*, including *Nosegays*. The first prize was gained by Mr. Foreman, gardener to the Rev. F. Cheere, with some good plants. The nurserymen had to contribute twelve plants in this section, and the first prize was taken by Mr. Barrett with some good specimens, among which *Le Grand*, *Duchess*, *Black Dwarf*, and *Lady Cullum* were conspicuous.

The class for six *Variegated Pelargoniums*, including *Nosegays*, was warmly contested, Messrs. Saltmarsh & Son, of Chelmsford, being first with small but remarkably well-grown plants of *Argas*, *Mrs. Pollock*, *Countess*, *Variegatum Quadricolor*, *Culford Beauty*, and *Sunset*. Mr. Foreman was second with much larger but not such well-grown plants, Mr. Grieve being third.

The class for six new Variegated Pelargoniums was well represented, Messrs. Saltmarsh & Son again being first with splendid plants of Crown Jewel, Swansdown, Meteor, Sunrise, Bird of Paradise, and Lady Cullum. Mr. P. Grieve was second with Lucy Grieve, Victoria Regina, White Lady, Italia Unita, Lady Cullum, and Light and Shade, a seedling variety of good promise. Third, Mr. John Mann, of Brentwood.

The silver cup given by the county for the best twelve seedling Variegated Pelargoniums of 1866-7, was won by Mr. Peter Grieve, with splendid plants of Isabella Clay, Clemmy, Eva Fish, Rothley, Allanton, Victoria Regina, Hiawatha, Black Adder, Lizzie Paget, Victor Galbraith, Bride of Dandelot, and Fanny Newham. Mr. Grieve also showed a second lot that were unnamed, but all were of extra quality. Messrs. F. & A. Smith and J. J. Chater also exhibited.

SUB-FLORAL COMMITTEE.—There were but few subjects for the Committee to examine, and they were so dispersed, and probably the opportunity of entering the plants respectively so difficult, that it is possible that some of them were overlooked. Messrs. Veitch received a special certificate for a most interesting collection of new and rare plants, the greater part of which had received first-class certificates; and Mr. Bull had a similar award for *Dalechampia Roezliana* rosea. Messrs. Smith, Dulwich, received first-class certificates for two seedling Bronze Zonal Pelargoniums with reddish-bronze zones on a yellow ground. Criterion seemed very promising and distinct, though somewhat resembling Wills's Queen Victoria. The other, *Fen de Joie*, is one of the same section with a more vivid zone. There were many other excellent seedlings but not sufficiently distinct. The similarity and the endless number of seedlings of these high-coloured Zonal Pelargoniums, make it very difficult to discover improvements on what have been determined to be first-rate kinds.

Mr. Turner, Slough, received three first-class certificates for seedling Carnations, and a Picotee—namely, *Carnation Tree Blue*, a beautiful purple flake; *Eccentric Jack*, a scarlet bizzure; and *Picotee Mrs. Fisher*, a light scarlet-edged variety with a pure white ground, and very beautiful. A second-class certificate was awarded for *Carnation Anthony Dennis*, a large, heavy, crimson bizzure.

Mr. Mann, Brentwood, exhibited a splendid mass of his exquisite scarlet Zonal Pelargonium *Lord Derby*; it was the admiration of every person who saw it, and is decidedly the very best scarlet Zonal in existence. A first-class certificate was awarded it in the spring, a special certificate was given on this occasion to certify its continued good character. Mr. J. Hill, Norwich, brought several plants of a double seedling *Fuchsia*, gigantic in size, but of bad form; a commendation was given it as a useful decorative and market plant.

Mr. Robert Pettitt exhibited a seedling Zonal Pelargonium, called *Reine d'Argent*; Mr. J. Denson twelve very ordinary seedling Zonals; Mr. G. Shepherd, gardener to J. Berners, Esq., six Zonals, some of them of the Tricolor section, but of no merit; Messrs. Wood and Ingram, Zonal seedling *Viceroy*; Mr. Robert Rea twelve seedling Zonals; Messrs. J. Nunn & Hobday, Norwich, three seedling Zonals; but none of these could be considered improvements on or even equal to many in cultivation. In Mr. Grieve's collection of twelve Tricolor seedlings of 1866 and 1867, *Eva Fish*, *Isabella Clay*, and the splendid-coloured *Victoria Regina* were very conspicuous.

In all you have said of this Show I heartily concur; but as an outsider and a hurried visitor I send you the following random thoughts.

I have often heard that the inhabitants of the neat, clean town of Bury St. Edmunds are somewhat difficult to rouse; but once duly excited to take up a cause, they rarely stop until they become enthusiastic. That the first visit of the Royal Horticultural Society to the provinces was well chosen was abundantly manifested by the triumphal arches that spanned the streets, the mottoes all wishing well to horticulture, commerce, and agriculture; and the numerous flags that waved from countless windows gave an appearance of life and brilliancy to even the narrowest streets, as, I should imagine, has rarely been manifested since the times of the Plantagenet kings, when the warrior was the object of popular acclaim instead of the triumphs of civilisation. All honour, then, to the ladies fair and the men true and loyal-hearted of old Bury.

It was a grand thing to see the Royal Agricultural and the Royal Horticultural Societies meeting together in the same place, as friendly, loving sisters; destitute of jealousy, and feeling no rivalry, unless the honourable rivalry which I trust they will never lose—the rivalry of striving who will do most to advance the best interests of their fellow-creatures. The Royal Agricultural Society in its visits to the provinces has done much to enlarge the sympathies, expand the intellect, and subvert the narrow-mindedness of agriculturists in particular, and of provincial people in general, and I have no doubt that the Royal Horticultural Society, if able to make these annual migrations, will be equally instrumental in undermining short-sighted prejudices, and establishing a broader platform of extended usefulness. This will be best done with the co-operation of provincial societies; but with or without that co-operation, the attempt must be made if the Society is to be worthy of its cognomen, "The Royal," the very title inferring an absence of those little pet projects and personal prejudices that are so apt to crop up in merely local societies.

Just as the throwing up a feather tells the direction of the wind, so will these meetings of the Royal Horticultural Society expand the

views of local societies; show them that if they are to prosper they must do something else than foster the whims, and be an excuse for the comfortable meetings of committees, which contrive to make away with as much of the money as is offered for prizes; and that prizes must be offered that will have a possibility of clearing an exhibitor in his necessary expenses, and not the few shillings which will not reimburse him for his outlay even if successful. And once more, in the meantime, the Royal Horticultural Society will help to give a social standing to gardeners, which they as yet do not possess in the provinces. Say what we will—boast of independence as we may, there is a satisfaction not only in knowing that you are respected, but that a certain social position is generally assigned to you, and which you feel you can occupy without any apishness or intrusiveness into the position of others. Gardeners, as a class and according to their merits, have never yet held the social position in the provinces to which they are justly entitled. Were I tempted to cross the border over into Scotland, that would be one of the incentives. The social position of good gardeners there is much higher than it is in England. There I should be received into good society cheerfully as an equal; but in similar society here I should often feel I was a sort of patronised or complimented, or just-tolerated individual.

Now, as an example in a small way of what the Royal Horticultural will do. Every card at Bury was marked with the name of the gardener first, as Mr. Blair, Mr. Peter Grieve, Mr. D. T. Fish, &c., recognising them as by their head and hands making the Show. In many provincial shows the gardener is nothing, the proprietor of the garden only is recognised. Such and such are exhibited by esquire, knight, baronet, lady, and lord, and if the gardener is named, it is an act of extra condescension. Now, wherever the Royal Horticultural Society goes, I feel convinced it will always place the gardener's name first, and I shall be vastly surprised if the gentry in general do not feel honoured in this little testimony borne to the worth of their servants. I met many gardeners on the 16th, at Bury, and from their gentlemanly appearance they well deserved the compliment thus paid them.

Let us hope the Royal Horticultural Society in its visits will be as instrumental in increasing the incomes of gardeners as I feel sure it will be in giving them an improved social position. The Royal Horticultural Society has always stood first in the money value of prizes for good productions, and another great benefit of the visits of the Society will be to show that there are great gardeners in the provinces as well as in the neighbourhood of London.

One thought more for the present. Everybody and every society has a perfect right to do what they like with their own, provided they do no harm to anybody else. A grand feature of the Show at Bury was the special prizes, above thirty in number, ranging in value from £25 to three guineas, and one guinea; but most of them five and ten guineas, offered by the Royal Horticultural Society, the *Gardeners' Chronicle*, and the *Journal of Horticulture*, the Societies in the district, and private individuals near Bury. There can be no question of the beneficial effect of these prizes, nor of the kind sympathy with which they were offered, and yet I know I shall be forgiven if I suggest, that in future instead of large single prizes, there should be more of them, so as to encourage competition. I ground this observation chiefly on two facts—the first, that some of these high prizes were taken very easily; and secondly, in several cases of severe competition, the second lot was very near the first in point of merit. It is true the special prizes might have helped to bring more splendid *Fuchsias* and *Pelargoniums* from Hardwicke, and among other subjects, *Lycopods* like young pyramidal *Cypresses*; the splendid three bunches of *Grapes* from Mr. Meads; the *Vines* in pots and orchard-house trees in pots from Messrs. Lane; fine *Pine Apples* from Mr. Barnes; *Picotees* from Mr. Buttrum, without a trace of a blotch or bar, reminding one of the florists' competitions of old, such a getting-up of these fine old flowers requiring incessant attention, care, &c. Many of the high prizes, however, produced nothing remarkable, even the £20 offered for fruit and vegetables was easily won, though there could not be a doubt as to the correctness of the judgment. "Our Journal" was more successful in attaining its object, by dividing twenty guineas into two.

What I want to hint is the giving by such societies the same sums, but in first, second, and third prizes, for the encouragement of exhibitors, as we may rest assured that few of them are able to take waggons to great distances without the hope of having some of their expenses defrayed. Thus, the Royal Horticultural Society offered £25 for the best ten fine-folaged and the best ten flowering plants, effectively grouped, and this was deservedly taken by the Messrs. Lee, of Hammersmith. The second group was also very good, brought all the way from Cheshire, and well deserved a second prize, but none was offered, though I heard afterwards that a second prize was offered by somebody else. Then the same remark would hold good of the Bury prize for *Ferns*, the first and the second were so near—at any rate, the latter were well worthy of a second prize. And so I might go on through the schedule, specifying what was good in the collections contending for the one special, and which thus failed to secure anything. Be it understood, I have no fault to find; as far as I noted, the best carried off the victory. I do not exhibit myself, but I know something of the feelings of exhibitors. I know that there are a few who thoroughly enter into the spirit of these large special prizes, and who say, "All or nothing—no seconds or thirds for me!" But I am

much mistaken if the great majority of exhibitors are able to be thus high-minded. They are obliged to calculate their chances, and from the smallness of their means to consider if they are warranted in encountering a large certain expense with a great uncertainty as to any return. The whole matter of exhibitions wants clearing up. In the great majority of cases gardeners show entirely at their own risk. Therefore I advocate not merely good prizes, but increasing the number of prizes, and instead of the schedule for the specials, taking the schedule for the cottagers more as an example. If it become the fashion to give few prizes, and these, of course, to the very best subjects that can be produced, then ere long little will be brought to these exhibitions, and few, except the thoroughly interested, will come to visit them. We should have the select learned conversaciones, but we might look in vain for the assemblages of the thousands. The great paying public must have quantity as well as quality to satisfy it for its money.

I heartily hope that, despite the unfavourable weather, the Exhibition will be a success financially considered. In a gardening point of view there can be no two opinions as to the greatness of the success, and that success reflects honour on all concerned. Of the grandeur of the Exhibition as a whole, the fine specimens, the splendid-foliaged plants, the beautiful Ferns, the magnificent Roses, the next-to-unequalled florists' flowers—Pinks, Picotees, and Carnations, the striking novelties, the charming collections of bedding plants, and the display of vegetables and fruit, I can only express my highest admiration; and I indulge the pleasing hope that this first provincial visit of the Royal Horticultural Society will only be the forerunner of, if possible, still grander triumphs in the future.—F.

HYBRID PERPETUALS A MISNOMER.

Now that florists and botanists can do almost all they like with plants, I think it would be a very good thing if they tried their hands on Roses, and endeavoured to make Hybrid Perpetuals more in accordance with their present name. I think "Perpetual" quite a misnomer, for really, after the general blossoming in June and July, Rose blooms for the rest of the season are like angel visits. Would it not, then, be well if, instead of "Perpetuals," we named them Hybrid "Occasionals?" It strikes me it would be more appropriate. Is there not, then, a good field open for experimentalists to make their Roses as perpetual as Teas and Chinas? If the faculty only set to work with the determination of a Beaton, the thing would be done.—W. H. B.

EUCHARIS AMAZONICA.

THE *Encharis amazonica* is one of those plants which amply repay the attention bestowed upon them. When in bloom, who does not admire their snow-white flowers, contrasting so well with the fine glaucous foliage when in health? One of its greatest recommendations is that it can be had in flower at any time by a little forethought and attention to its growth.

Here we find them most useful to come in about Christmas and the spring months. Now is a good time to look over them, and see if any are in want of fresh potting; if so, let it be done at once, carefully shaking out the bulbs, as the roots are easily broken off. If a larger stock of plants is required, arrange the bulbs to their sizes, put the large ones into their flowering pots at once, but not too many bulbs of the large ones in a pot, for if the foliage gets too crowded it is at the expense of the flowers the following season. The small bulbs should be put into small pots, which will require a shift whenever the roots appear at the side of the pots. This lot can be grown on in autumn for a month or six weeks, which will make a fine succession of bloom the following spring.

We find a good fibry loam chopped up rather rough—with a good quantity of old mushroom or deer-dung when to be had—sifted through a fine sieve, with a sprinkling of silver sand, well mixed together, will suit them well. In potting great care should be taken to see that the pots are well crocked, as they are very impatient of stagnant water, although, when growing, they delight in plenty of moisture, both at the roots and in the atmosphere.

After potting they should be placed in a house where they can have the benefit of a temperature of from 65° to 70° at night, with a rise by day of 10°. They should have the advantage of a little shade on bright days. After they are in full growth a little dung water, with some soot mixed along with it, gives the foliage a brighter appearance. I prefer dung water to guano water, for if the latter is not carefully used it is apt to burn the thick fleshy roots.

Grown on in this temperature until about September—the smaller bulbs later, as recommended before—gradually harden

them off until they can stand in a house with a heat of about 55°. If there is not much room at command, lay them on their sides under a stage where they can have a little light. Here they may lie for two months, giving them little or no water, but syringe them every other day. When wanted to start, let them be taken to the potting-bench, examine the drainage, and give them a rich top-dressing; then, if found very dry, put them in a bucket of tepid water until completely wet. Now that they are ready for flowering, plunge the pots in a bottom heat of about 80°, with 60° top heat. This I consider one of the conditions which makes them show so well and strong, which they will generally do in about six weeks. Plants in 11-inch pots treated in this way here this spring threw up ten and eleven flower-spikes. Hardened off they stood in the entrance hall four and five weeks during the severe weather we had in January. Standing so long is a great recommendation to the *Eucharis* as a room-decorative plant.—A. HENDERSON, *Thoresby Park* (in *Gardener*.)

WHAT CAUSES VARIEGATION?

VARIOUS opinions have been expressed, and many reasons assigned, as to the cause of the variegation of the foliage of plants. Much valuable and interesting information has from time to time appeared on the subject in these pages, and it may not now be a misapplication of time for any one to examine the alleged causes of variegation.

What causes the variegation of the foliage of plants I do not profess to know, neither can I learn by what process I can produce variegation. It is well known that abnormal forms, commonly, at least very frequently, occur along with normal in the same individual, and that some parts of a tree will have green and others variegated leaves. I am aware that the pollen of one species applied to the stigma of another species will produce a hybrid or departure from the normal form; that a hybrid will not retain its character if perpetuated from seed, even without being further impregnated with the pollen of another species or hybrid; and that it will vary still more when impregnated with the pollen of a hybrid. I also know that breeding in-and-in will produce still further departures from the original, and that a continuation of this in-and-in crossing of varieties will produce variation in the habit, colour, and form of leaves and flowers, to say nothing of the hardness and longevity of the plant. I know that by such a process we obtain various tints of colour and double flowers, many variations in the tints of the leaves, and also in their forms; in fact, some may have variegated foliage, striped and blotched, whilst others have striped and blotched, or spotted flowers. There is nothing in all that proving that the variegation of the foliage of plants is caused by any well-defined system of hybridisation; but we have the same occurring in plants not subjected to such a process, and there are variegated species that were for a considerable time quite green, and all the while exhibiting no traces of variation from the normal condition. I want to know why from these normal conditions variegation should be so suddenly and unaccountably produced. Is it attributable to some alteration in the constitution of the individual through the agency of foreign pollen applied by insects or other agency to the stigma of the seed parent? If so, in what manner are we to act to secure variegated foliage when both the parents have green foliage? Can it be attained by fertilising with the pollen of another species or genus, the stigma of the plant desired to have its foliage rendered more attractive by adding another colour to the leaf? I think that if there be a successful union we shall obtain a hybrid, a variation in the habit, foliage, colour of flower, or some other deviation from the normal form. I should like to know of a hybrid with variegated foliage, and yet we have variegated species no way differing from the ordinary form of the species, except in the colour and marking of its foliage. Comparatively with cross-bred we have very few hybrids. It may appear strange, but I beg to submit that we have no known hybrid with variegated foliage, but many variegated species that are constant. If this be the case, surely the variegation of the foliage of plants is not caused by the agency of pollen.

We have undeniable testimony, however, in the introduction of Mrs. Pollock *Pelargonium*, that the probability of obtaining a tricolor-leaved *Pelargonium* was foreseen by Mr. Grieve, and by adopting a clearly-defined system of crossing, the wished-for object was attained by him. Mr. Grieve makes no secret of the mode of crossing which he pursued in order to obtain

Mrs. Pollock. At page 275 of the last volume, Mr. Grieve stated—"The union of a zoned with a silver-margined variety was ascertained to produce progeny having pink or red zones." I understand from this that to such a process of crossing *Italia Unita*, *Argus*, and *Burning Bush* are due. Mr. Grieve further informed us, that it was the reasoning from this analogy that led him to conclude, that by the "union of a zoned variety with a yellow-margined variety," it was reasonable to expect a "progeny having yellow margins, and with zones of more intensity of colour."

Now, this proves that the adding of another colour to the leaf of *Pelargoniums* was foreseen, and that means were adopted for that express purpose. It proves that the colouring matter of the leaf of one variety may be transmitted through the agency of the pollen, that once transmitted the abnormal state of the plant is permanent, and that the transmission of the colouring of the leaves to the seedlings to which the plant acted as seed parent becomes hereditary.

Mr. Pearson, however (page 243, Vol. XI.), shows that the abnormal condition of the seed parent is not transmissible to the seedlings, but that they diverge from the ordinary character of the seed parent, and partake of the character of the pollen parent. Mr. Pearson states, "My first attempt was to cross Mrs. Pollock with *Woodwardiana*, saving the seed from the former. The produce were all dark Zonal *Pelargoniums*," &c. Here we have undeniable testimony, as in Mr. Grieve's case, that the colouring matter of the pollen parent is transmissible to the progeny of the seed parent, but not the abnormal condition of the seed parent in addition to that of the pollen parent. It is further stated by Mr. Pearson, that by crossing the darkest-zoned plants with the best of the tricolored, the result was that tricolored have produced tricolored and green seedlings. The change, then, from a green to a coloured form in the seedling is effectible and transmissible so as to become hereditary, by employing the pollen of a variegated variety to the stigma of a green-leaved variety. Some of the seedlings will have foliage partaking of the colouring matter of the leaves of the pollen parent.

But this proves nothing as to the cause of a plant's departure from the normal state, or why it should become variegated, yet I am firmly of opinion that variegation has its origin in the pollen, and consider it proved that it is of the male or pollen parent, and not of the female or seed parent. It has been proved by the late Mr. Beaton, that in *Pelargoniums* pollen from short anthers produces pigmies, and the same deduction has been made by Mr. Henry, as regards *Rhododendrons* (see Vol. I., page 312, and Vol. II., pages 41 and 42). Moreover, it has been proved by every cross-breeder, that it is no very difficult matter to cross *Pelargoniums* and *Rhododendrons*, in whose flowers exist the odd pair of short stamens, to the verge of variegation beyond which it is impossible to grow them. We have another evidence of this in the seedlings Mr. Pearson obtained by crossing the tricolor-leaved with the dark zoned, and the reverse; "those plants which came up with white or nearly white cotyledons all died."

I have had a similar result with *Celery*, for noticing a great variation in the progeny resulting from a union of white with red *Celery*, I was led to pursue the subject further; as I anticipated, the result was a white-foliaged seedling. I submitted it to the criticism of the Editors in the autumn of 1862. Their reply to my inquiries as to the probability of perpetuating a variety of *Celery* having white leaves and stalks, thinking it would be valuable on account of its requiring no blanching, left me every hope of obtaining the wished-for object, for they replied, Vol. III., page 598, as follows:—"This whiteness, which has come naturally without the plant being earthed up, will not, we fear, prove permanent. You had better save seed from it, but the seedlings from that seed we think will come green. If they do not, it will be a valuable addition to our kitchen-garden stock." The plant never did seed. It was one of many that came up with white leaflets and red midribs. It was white-foliaged from the cotyledons, and was so throughout, perishing after an abortive attempt at seeding.

In the same year, struck with the peculiar colouring of the seed of Dwarf Kidney Beans, I strove to attain a knowledge of the peculiarity. I obtained a variety having foliage blotched with white. Elated with my success, for as yet I had not obtained any divergence in the progeny of the seed parent from its normal condition, I thought I could do almost anything now that a break in this anything-but-easily-crossed family had been effected. I had a very weak plant, and stupidly enough extracted all the pollen from a pair of solitary flowers,

which refused to take where applied. I had a single white-coloured Bean, which, to all intents and purposes, ought to have been speckled; this revived my hopes, as I had a confirmation of the successful break made in a difficult family. The consummation of my hopes was a seedling with white cotyledons, which only lived to show its still more whitened plumule. I had consolation in reading Mr. Henry's concluding sentence of his most excellent and enlightening article at page 43 of Vol. II., where he says of experimentalists, "Yet let them not go to far extremes, else failure and vexation will inevitably be the fruit of their labours."

It has been stated that seedlings partake of the character of the pollen parent. It should be taken, and is here intended to mean, that the seedling resulting from a successful union will have, in addition to its marking inherited from the seed parent, some addition to its character imparted to it through the pollen parent; but it may be a divergence towards the normal form, or partaking of some abnormal character.

It is asked, Why should variegation be of the pollen? I submit that it is utterly impossible to cause a species to deviate from its normal character without acting on the seed, and consequently by pollen, by which process alone the characters of plants become abnormal. It is certain that some other influences will cause a divergence as regards the plant's habit, colour of flowers, or leaves; but in no instance that I know can the divergence be perpetuated by seed. A plant may be altered by soil, as in the case of the *Hydrangea*, so as to change the colour of its flowers from pink to blue. Its leaves may be more or less blotched or striped with white or yellow, through chemical or other agency causing a departure from the plant's normal state; but such divergences are not capable of being perpetuated by the seed, but by the parts of the subject, either as cuttings, layers, buds, or grafts. The abrasion of a horse's skin may cause the hair upon that part to come white, but it does not follow that the progeny will be piebald.

The fact is, as it may be read on the page of Nature, if anything is to be changed or altered in Nature it must begin with life. That there have been constant changes going on in the vegetable kingdom since the time when plants first sprang into life—a mixture of species and genera—the many divergences in seedlings from what we look upon as normal subjects are in themselves ample testimony. Who can doubt the mixing of kindred species and genera? and is there not evidence that many so-called species are but so many slight departures from one species intermixed with another? I think the ease with which some species sport is an instance of this, and of it many species give abundant proof in the variation of their progeny.

In conclusion, I submit that variegation fixed is of the pollen—1st, defective or immature; 2nd, by fertilisation with a plant in which the colouring matter of the leaves is diverse; 3rd, by the difference of coloration in the pollen. By fertilisation effected between two varieties in which the coloration of the flower is different. By inoculation by the bud, as that of the variegated *Jasmins* budded on the common or plain-leaved. Lastly, by the destruction of the organs of secretion and respiration, and by the impairment of the organs of nutrition.—G. ABBEY.

AN ANCIENT ROSE TREE.

WHILE very old Oaks, Yews, and Chestnuts have each had their memories embalmed in the pages of history, there is a humbler member of the vegetable kingdom which has not, so far as I know, found a place in English botanical records. I allude to an exceedingly ancient Rose tree at Hildesheim, in Hanover, which is still flourishing (as a friend of mine, who has lately seen it, tells me), with all the vigour of youth. This remarkable tree (or rather climber, for it is supported against the wall of a church), was in existence when Christianity itself was little more than a thousand years old; and, if we may believe tradition, had even then been blooming for well nigh three hundred summers! But I will give its history in the word of the well-known botanist, Herr Leonis, himself a resident at Hildesheim. "The oldest known Rose tree in the world is one at present growing against the wall of the cathedral of this town (Hildesheim), remarkable alike for its extreme age, and for the scanty nourishment with which it has supported itself for so many centuries. It varies but slightly from the common Dog-rose (*R. canina*): the leaves are rather more ovate, the pedicels and lower leaf-surfaces more hairy, the fruit smaller and more globular. The stem is 2 inches

thick at its junction with the root, and the whole plant covers some 24 square feet of the wall. Bishop Hezilo, who flourished 1054—1079, took special interest in this Rose as being a remarkable monument of the past; and when the cathedral was rebuilt after being burnt down in 1061, he had it once more trained against the portion of wall which had been spared by the fire. Tradition states that, in the year of grace 814, the Emperor Ludwig the Pious, son of Charlemagne, was staying with his Court at Elze. Being desirous of hunting in the huge forest where now stands Hildesheim, mass was said by the Imperial Chaplain at the place of rendezvous. By some mishap, when the service was concluded and the party dispersed, the vessel containing the sacred elements was left behind. On returning to the spot the following day, great was the surprise of the chaplain to find the holy vessel overshadowed by the

tender branchlets of a lovely Rose, which had sprung up in the night, and now filled the air with the perfume of its flowers. The Emperor shortly after arrived and by his command a chapel was built, with the altar standing on the spot occupied by the roots of the Rose,—that very Rose which is now blooming as freshly as though a single decade, and not a thousand years, had passed over its head!" So far tradition. Certain it is that the roots of the existing Rose trees are buried under the altar of the cathedral, and, consequently are inside the building, the stem being carried through the wall to the outer air by a perforation made expressly for it. My informant tells me that the plant is held in the highest veneration by the inhabitants, and that no one is permitted to gather the flowers or break the branches.—W. W. S. (in *Science-Gossip*.)

UNIQUE IRON CONSERVATORY.

THIS is now erected near the Rhododendron tent at the Royal Horticultural Society's Gardens at South Kensington, but does not belong to the Society, and may be purchased. It is particularly well adapted for pleasure grounds to be used

for statuary and hardy plants, or as a saloon for dancing, *déjeuners*, or *fêtes*. If a glass roof were introduced, and the sides enclosed, it would form a most beautiful conservatory.

The first intention was to cover the exterior of the roof with



coloured tiles forming geometrical patterns, and the inner part of the roof or ceiling with white tiles, ornamented in grey or pale blue. Striped spring blinds were intended for the panels between the columns, so as to enclose it at pleasure. There is

a provision for fifty-three star-lights either for gas or wax candles. The whole was designed by an eminent architect, who prepared special drawings, and superintended the modelling for every part. The strength of the structure was determined

and tested by engineers mainly engaged in the production of iron buildings, and the whole of the parts were produced by Messrs. Trollope, the contractors.

Further information can be had of Mr. Fox at the office of the Horticultural Society, or of Messrs. Trollope, Halkin Street West, Belgrave Square, London, S.W.

SAWDUST AS A MANURE.

In consequence of the dearth of straw I have lately bedded my horses with sawdust, but I now find that I have a difficulty in selling the manure, the farmers saying that the sawdust breeds wireworm. Do you consider there is any truth in this, and do you know of any objection to such manure?—H. N.

[There is not even a shadow of truth in the objection, and if the sawdust employed be that from any of the Fir tribe, the turpentine in it is very obnoxious to insects. We know of many gentlemen who have the floors of the stalls of their riding horses constantly covered 3 or 4 inches deep with sawdust, as it is soft and moist for their feet. They never use any other bedding, and no farmer that we ever heard of before objected to purchase the manure. Professor Johnston in his "Lectures on Agricultural Chemistry" says, "Sawdust decomposes slowly when ploughed into the soil in its dry state, but it nevertheless gradually benefits the land, and should not, therefore, be permitted in any case to run to waste. It forms an excellent absorbent also for liquid manures of any kind, which it preserves from sinking too rapidly when they are to be applied to porous, sandy, or chalky soils, while these liquids again hasten the decomposition of the sawdust and augment its immediate effect upon the land. In localities favourable for the collection of seaweed, it may also be more rapidly fermented by an admixture with this substance. In forms a useful ingredient in some of the mixed manures which have recently come into use."]

NATIONAL TULIP SOCIETY'S SHOW.

The annual Exhibition of the National Tulip Society was held in the Mechanics' Institution, Stockport, May 28th, under the management of the South Lancashire Tulip Society, Stockport, and in every respect proved a great success. Fifty-two Tulip-growers entered, of whom more than forty exhibited, and produced a magnificent stage of upwards of two thousand blooms, most of which were in fine condition. Beside growers from the immediate neighbourhood, there were present others from Birmingham, Gloucester, Whitby, York, Leeds, Sheffield, Derby, Leigh, and Warrington, showing the vitality of the Tulip fancy, and the wide-spread interest created by the Society's Exhibition. The Show was unanimously pronounced to be the best ever seen. The display was much heightened by a fine collection of greenhouse and herbaceous plants in flower, together with some beautiful bouquets and baskets of cut flowers, principally from the Vernon Park Conservatory. The entire arrangements did great credit to the executive, and especially to the active and indefatigable Honorary Secretaries, Mr. Councillor Woolley and Mr. W. Longson. Prizes amounting to upwards of £50 were paid to the winners, and after defraying all expenses a small balance remained for the Stockport Mechanics' Institution.

Most of the well-known good old varieties were shown in very fine style. Among more-recent and less-known kinds, Storer's Dr. Hardy and Dr. Hardy's Ajax are two of the very highest class in flamed bizarres. Ashmole's Garibaldi is a very fine feathered bizarre. Mort's Beauty of Home is a fine pure-feathered rose of the Lady Crewe colour. Slater's Kate Connor is a beautiful feathered rose, with the brightest scarlet-coloured feather in the whole range of roses. Martin's Mrs. Lomax, rose, is very good, both as a feathered and a flamed flower. Hardy's Talisman, both as a feathered and flamed flower, is about the best byblæmen in cultivation; the form is first-rate, the marking very fine, and almost black in colour on a pure white ground. Willson's British Queen, Hepworth's Bessie, and Cotterill's Parity, are all very fine feathered byblæmens.—S. B. S.

The following is a list of the awards:—

First stand of twelve, Mr. Wm. Lea—Mrs. Lea, Heroine, Violet Aimable, Mrs. Pickerill, Curione, Masterpiece, Sans Joe, Ajax, Duchess of Sutherland, Bacchus, Sarah Hedley, Triumph Royal. Second stand of twelve, Mr. John Turner—Apelles, Charles, Mrs. Pickerill, Violet Aimable, Heroine, Mrs. Lea, Sans Joe, Polyphemus, Alex. Magnus, Denman, Aglaia, Triumph Royal. Third stand of twelve, Mr. Wm. Longson—Waterloo, Lord Lilford, Violet Aimable, George Gleamy, Heroine, Lady Crewe, Sans Joe, Paxton, Denman, Queen Charlotte, Aglaia, Lavandicken. Fourth stand of twelve, Mr. George Mort—Colbert, J. Wilkinson, Seedling, Aimable, Comte, Heroine, Captain White, Slater's Telemachus, Charlotte, Denman, Aglaia, Bion.

First stand of six, Mr. Wm. Lea—Masterpiece, Violet Aimable, Heroine, Ajax, Bacchus, Triumph Royal. Second stand of six, Mr. Peter Swindells—Charles, Beauty, Andromeda, Sans Joe, Denman, Aglaia. Third stand of six, Mr. J. Turner—Charles, Adonis, Heroine, Sans Joe, Denman, Aglaia. Fourth stand of six, Mr. H. Travis—Charles, Violet Aimable, Heroine, Sans Joe, Adonis, Aglaia. Fifth stand of six, Dr. Hardy—Garibaldi, Queen of North, Heroine, Sir J. Paxton, Lord Denman, Lady

C. Gordon. Sixth stand of six, Mr. Sharpe—Masterpiece, Violet Aimable, Heroine, Storer's Seedling, Duchess of Sutherland, Aglaia.

First stand of three Feathered, Mr. Wm. Lea—Heroine, Paxton, Violet Aimable. Second stand of three Feathered, Mr. Haynes—Lord Sydney, Seedling, Heroine. Third stand of three Feathered, Mr. Jno. Morris—Devonshire, Bienfait, Aglaia. Fourth stand of three Feathered, Mr. Millar—Masterpiece, Heroine, Edgar. Fifth stand of three Feathered, Mr. Haynes—Royal Sovereign, Seedling, Aglaia. Sixth stand of three Feathered, Mr. Parkinson—Willson's King, Victoria Regina, Heroine.

First stand of three Flamed, Mr. Haynes—Paxton, Denman, Triumph Royal. Second stand of three Flamed, Mr. T. Mellor—Masterpiece, Bacchus, Aglaia. Third stand of three Flamed, Mr. J. Moores—Polly, Denman, Aglaia. Fourth stand of three Flamed, Mr. Haynes—Triumph Royal, Duchess of Sutherland, Lord Sydney. Fifth stand of three Flamed, Mr. Thurston—Sir J. Paxton, Lord Denman, Aglaia. Sixth stand of three Flamed, Mr. Wm. Lea—Sans Joe, Duchess of Sutherland, Aglaia.

First stand of two, Feathered and Flamed, Mr. T. Mellor—Charles, Sans Joe. Second stand of two ditto, Mr. J. Moores—Heroine, Denman. Third stand of two ditto, Mr. Wm. Lea—Heroine, Devonshire. Fourth stand of two ditto, Mr. Wm. Longson—Heroine, Denman. Fifth stand of two ditto, Mr. W. Davenport—Charles, Polyphemus. Sixth stand of two ditto, Mr. Wm. Davenport—no prize.

The best Feathered Tulip in the whole Exhibition, Mr. John Turner—Apelles.

The best Flamed ditto, Mr. H. Travis—Atlas.

FEATHERED BIZARRES.—1, Apelles, J. Turner; 2, Charles, Thos. Mellor; 3, Paxton, Wm. Lea; 4, Devonshire, Wm. Lea; 5, Magnus, J. Hart; 6, Lord Lilford, Luke Ashmole; 7, Robert Guest, J. Morris; 8, Masterpiece, T. Mellor; 9, Surpasse Catalafque, J. Knott; 10, Lord Byron, R. Keysey.

FEATHERED BYBLÆMENS.—1, Adonis, Wm. Lea; 2, Lancashire Hero, G. Mort; 3, Seedling, G. Mort; 4, Queen of North, Wm. Lea; 5, Violet Aimable, Wm. Lea; 6, Cotterill's Purity, Wm. Lea; 7, Seedling, David Jackson; 8, Bessie, Wm. Lea; 9, British Queen, W. Willson; 10, Seedling, —Haynes.

FEATHERED ROSES.—1, Heroine, R. Keysey; 2, Aglaia, Wm. Lea; 3, Kate Connor, Dr. Hardy; 4, Beauty of Home, G. Mort; 5, Julia Farace, R. Keysey; 6, Lady Crewe, John Knott; 7, Cerise prime Saperbe, J. P. Sharp; 8, Inimitable, J. Hart; 9, Madame St. Arnaud, J. Morris; 10, Andromeda, John Knott.

FLAMED BIZARRES.—1, Paxton, John Hart; 2, Sans Joe, T. Mellor; 3, Merit, Wm. Hart; 4, Polyphemus, J. Thurston; 5, Mr. Hextall, —Haynes; 6, Emperor Nicholas, Dr. Hardy; 7, Dr. Hardy, —Haynes; 8, Paxton, J. Thurston; 9, Saxton, W. Hart; 10, Lord Palmerston, —Haynes.

FLAMED BYBLÆMENS.—1, Lord Denman, W. Davenport; 2, Surpasseant, J. Hart; 3, Princess Royal, D. Woolley; 4, Alexander Magnus, Hugh Heclesley; 5, Gavazzi, J. Hart; 6, Duchess of Sutherland, Dr. Hardy; 7, Wallers, G. Mort; 8, Bienfait, W. Davenport; 9, Salvador Rosa, Joshua Higgs; 10, Queen of North, H. Steward.

FLAMED ROSES.—1, Triumph Royal, Wm. Hart; 2, Aglaia, J. Thurston; 3, Mabel, T. Mellor; 4, Juliet, W. Willson; 5, Lavandicken, W. Davenport; 6, Rose Guerre, G. Mort; 7, Camilla, G. Mort; 8, Madame St. Arnaud, T. Mellor; 9, Village Maid, G. Mort; 10, Lady C. Gordon, J. Thurston.

BREEDERS.—First stand of six, Wm. Longson—Dr. Hardy, Sarah, Ann Hathaway, Paxton, Sutherland, Mabel. Second stand of six, Wm. Lea—Nicholas, Adonis, Olivia, Seedling, Miss Atherton, Queen of England. Third stand of six, G. Mort—Unknown, Lady Atherton, Queen of England, Paxton, Seedling, Juliet. Fourth stand of six, T. Mellor—Storer's Seedling, Duke of Manchester, Annie McGregor, Sir Colin Campbell, Sarah Sophia, Queen of England.

BREEDERS.—First stand of three, Wm. Lea—Ariosto, Miss Atherton, Queen of England. Second stand of three, J. Moores—Paxton, Earl Warwick, Seedling. Third stand of three, J. Warren—Paxton, Seedling, Seedling. Fourth stand of three, Wm. Longson—Paxton, Adonis, Miss Boot. Fifth stand of three, T. Mellor—Storer's Seedling, Wm. Bentley, Queen of England. Sixth stand of three, P. Swindells—Duke of Hamilton, Unknown, Unknown.

BIZARRÉ BREEDERS.—1, Seedling, Wm. Lea; 2, Nicholas, W. Longson; 3, Paxton, J. Hall; 4, Seedling, W. Lea; 5, Ashmole No. 1, Luke Ashmole; 6, Seedling, W. Lea.

BYBLÆMEN BREEDERS.—1, Adonis, J. Hart; 2, Delicata, J. Moores; 3, Miss Whittaker, G. Mort; 4, Duchess of Sutherland, W. Longson; 5, Seedling, J. Thurston; 6, Miss Forrest, J. Peacock.

ROSE BREEDERS.—1, Queen of England, Wm. Lea; 2, Juliet, Wm. Lea; 3, Martin's Seedling, Jno. Hart; 4, J. Waterson, T. Mellor; 5, Mabel, Wm. Longson; 6, Veritas, R. Keysey.

The best Breeder in the whole Exhibition, T. Mellor—Storer's Seedling.

[This report was to have been sent to us at the time of the Show being held, but has only just been received; and we should not insert it if it were not that Tulip-growers being about to take up their bulbs, and having to repair losses and add to their varieties, may find some of the lists and notes useful.]

PROPOSED EXHIBITION OF VARIEGATED ZONAL PELARGONIUMS.

No one seems to have taken any notice of Mr. Watson's challenge,* which appeared in the *Gardeners' Chronicle* and in the *Journal of Horticulture* lately; but it would be very interesting to have, this autumn, an exhibition of those beautiful plants. That held on the 21st of May was too early in the season; I would, therefore, suggest that an exhibition be held at South

* With respect to this, Mr. D. T. Fish writes—"That owing chiefly to the lateness of the proposal, and the fact of Mr. Watson having required six plants of each variety, the amount of support was not sufficient to enable the prizes to be offered. He has, therefore, returned the money with which he has been entrusted."

Kensington in connection with the Floral Committee's Meeting on the 17th of September, and that to supply the necessary funds a subscription be commenced amongst nurserymen and raisers of new Pelargoniums. If twenty persons could be found to subscribe £2 each, twelve prizes could be given; this would make the exhibition attractive, and would induce every one having few or many of these Pelargoniums to exhibit their productions. General satisfaction would thus be given; the very best of the varieties sent out this season, and those that are in course of preparation for next year, would be seen; and much confusion would be avoided.

I would suggest that there be four classes, and that three prizes be given in each—viz.:—

Class I.—For the best twelve Gold and Silver Zonate or Tricolor Pelargoniums, including those sent out in 1867, and those to be sent out in 1868, one plant of each variety. The first prize to be given for the best and most distinct collection. First prize, £7; second, £5; third, £3.

Class II.—For the best six varieties, three plants of each. Conditions the same as in Class I. First prize, £5; second, £3, third, £2.

Class III.—For the best three varieties, six plants of each. First prize, £4; second, £3; third, £2.

Class IV.—For the best and most distinct Tricolor, either Gold or Silver-variegated. First prize, £3; second, £2; third, £1.

I think the above would give all a chance of competing, those only possessing one or three good kinds, and those having twelve. Three prizes may also be offered for the best varieties of Gold Zonal Pelargoniums. I would also suggest that three amateur jurors of known ability be appointed, and that the Council of the Royal Horticultural Society be invited to offer extra or special prizes for plants possessing superior merit that are not provided for in the above classes. I shall have pleasure in contributing £2 for this purpose, and hope we may see a spirited competition.—J. WILLS.

DUTY-FREE TOBACCO.

I AM surprised at the objections raised by Mr. Tafe (page 27), to my suggestions as to Cayenne pepper. If he had said that the mixture would be annoying to the gardener, unless he took great care not to breathe the atmosphere, I could have understood it; but how the mixture can fail to protect the revenue, I am unable to conjecture. If Mr. Tafe puts half a grain into a pipe of tobacco, he will never try the experiment again. As to damaging plants, red pepper, by itself, has often been recommended as a fumigator.—G. S.

WHO IS AN AMATEUR?

WILL you inform me if any gentleman growing plants and selling them to make a profit may show at a horticultural show as an amateur?—A FIVE-YEARS SUBSCRIBER.

[Selling a portion of the produce of a garden does not render the seller a nurseryman. Many noblemen and gentlemen who exhibit annually sell the surplus fruits of their gardens and forcing-houses, yet are not excluded by so doing from contending for prizes in the amateur classes.]

NOTES AND GLEANINGS.

THE success that has attended the Royal Horticultural Society's Show at Bury St. Edmunds is encouraging in many ways. It is so to those who desire to see the advance of horticultural pursuits, to know that the elevating taste which these pursuits engender is so widely diffused among all ranks of society, and must carry beneficial results with it. And it is particularly encouraging to the Royal Horticultural Society to have drawn into its treasury so goodly a sum as upwards of £1400, thereby leaving a respectable margin in favour of the Society after meeting every expenditure. As an experiment country shows have been proved to be successful on such a scale and with such a spirit of liberality as the Society has manifested on this occasion; and we feel confident that in the future even greater success is in store, when the exhibitions are held in more populous and more wealthy districts than the eastern counties make any pretension to. All honour to Bury St. Edmunds!

— THE visit of the Sultan has been instrumental in bringing out the latent energies of the horticultural world, as well

as those of the other departments of the country. On Monday evening His Grace the President of the Royal Horticultural Society gave a conversazione in the conservatory at South Kensington, which for the extent of the arrangements and the brilliancy of the company equalled in its way anything that has been given in honour of His Imperial Majesty. The gardens were tastefully illuminated with Chinese lanterns suspended on the trees, and coloured lamps defining the outlines of the flower-beds; while the terraces were lined with guardsmen, holding Bengal lights. At the new India Office, too, horticultural skill was brought into requisition by the utilisation of the great resources of Messrs. Veitch & Sons, of the Chelsea Nursery, with the assistance of Mr. Smith, the excellent Curator of Kew Garden, and Mr. Eyles, of the Royal Horticultural Society. The arrangements at the Guildhall were entrusted to Mr. D. S. Williams, of Holloway.

— THE following horticultural shows are announced for the ensuing month:—

August 17th	Batley.
" 20th	Newport, Salop.
" 21st	Wotton-under-Edge.
" 22nd	Keovil District (Trowbridge).
" 23rd	Tamworth.
" 24th	Royal Hort. Soc. Ireland.
" 25th	Malmesbury.
" 26th	Fermoy (Ireland).
" 27th	Wolverhampton.
" 28th	Sherborne.
" 29th	Basingstoke.
" "	Brill.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Broccoli, continue planting out Cape and other sorts, also some late *Cauliflowers*. *Carrots*, keep the succession-beds of Horn Carrots thinned in due time. *Endive*, a considerable breadth should be planted without delay. High manuring is absolutely necessary to produce this valuable salad in perfection. In planting succeeding crops keep raising the beds higher as the season advances. *Cabbages*, make a sowing of Early York, Vanack, or some other approved sort. *Garlic*, take up, also *Shallots*, when their leaves have faded; lay the bulbs on clean gravel, protecting them from rain, and storing them when their coats are thoroughly dried. *Herbs*, gather for drying before the flowers open; they should be spread out thinly, and dried quickly. *Spinach*, prepare ground for the first sowing of Flanders Spinach, the seeds of which are not prickly, neither are those of the Lettuce-leaved Spinach, an excellent variety for winter, with thick dark green leaves. Also let a good breadth of ground be duly prepared for winter Spinach forthwith by thorough-trenching and burying a good coat of half-rotten manure in the bottom. It generally succeeds best in highly-raised beds.

FRUIT GARDEN.

The foreright shoots of Pear trees against walls or espaliers should be so reduced as to occasion no injurious degree of shade to the fruit now swelling, nor to the foliage of buds forming for future bearing. If previous directions have been attended to the trees should exhibit only a sprinkling of shoots, and those already partially shortened may now be cut back to within 3 inches of their bases. All shoots that have pushed a second time, or that may afterwards do so, must be checked. The shoots of Peach and other stone fruit trees should be kept neatly trained, and free exposure of the foliage to light should be kept especially in view. It is improper to train two shoots in a space which the foliage of one would sufficiently cover, whilst the other might be trained along an adjoining old naked branch, the covering of which is no disadvantage, but rather the contrary. See that nails have not been driven in too near the fruit. Strawberry runners should be procured for new plantations without delay. Those who cannot spare the ground for the new plantation may prick the plants out about 6 inches apart in prepared beds, and remove them with balls in October or early in February. As main crops, we would recommend the Black Prince and Keens' Seedling for the earliest, the British Queen for the second, and the Elton for the last, the latter is invaluable. Trench down Strawberry plantations intended to be done away with as soon as the crop is gathered.

FLOWER GARDEN.

No flower is more popular or more useful than the Rose, whether as standards by the sides of promenades, in beds or

masses, or enlivening the conservatory in the depth of winter. With regard to all these purposes the plants demand a considerable share of attention, especially at this period. Budding, cutting-striking, final potting, &c., are processes of paramount importance at the present moment. The Hybrid Perpetuals, Teas, Bourbons, and the Chinas are the most eligible classes from which to select for pot-culture. Proceed with Rose-budding without delay. Keep down suckers, and clear the stems of wild shoots. See that all hips are cut away from those which blossomed early; these exhaust the plant much. Climbing Roses out of bloom trained against walls would be much improved next season by having a large portion of the old wood cut away, nailing or tying-in as many of the strong young shoots as are necessary to replace those which have been removed. Climbers of all kinds should be constantly nailed or tied as they advance in growth, in order to prevent them from being injured by the wind.

GREENHOUSE AND CONSERVATORY.

The pot Roses intended to flower in the conservatory late in the autumn, should now receive whatever pruning is necessary. All those which require a shift should have it forthwith, in order that they may have a pot full of healthy roots by the flowering period; this, and the application of liquid manure, together with a sweet and mild atmosphere, will perform wonders. After these operations they should be placed in some open and airy spot, and if plunged in ashes they should be frequently turned. Give them regular waterings, and persist in picking off the blossom-buds as they appear, from those required to blossom in November and December. Look out and encourage a good supply of plants for a late autumn display. Fuchsias and Achemenes in succession, and even choice Verbenas in somewhat thick masses in wide-mouthed pots, will add to the general effect. Remember that all those required to blossom in midwinter, must have their final shift in good time. There is no success in forcing, or even retarding, without a pot full of roots. Head down the early-flowering Pelargoniums, still continue to expose them to the open air until they begin to break, when they must be removed into the house. Continue to propagate them by cuttings, which will now strike freely in the open border. Pick off all decaying and decayed flowers in the conservatory and greenhouses, and let cleanliness prevail in all departments.

STOVE.

Stove plants in general having made a good growth, the next point is to get such growth matured. Afford a more free circulation of air, and avoid shading as much as possible. The utility of a second house for Orchids will be more readily seen at this period than, perhaps, any other. The early-growing kinds, several of which are winter or early spring bloomers, will now require the withdrawal of a portion of the atmospheric moisture still necessary to many others; several of them, such as the Cattleyas, might be removed to a vinery were it not for the attacks of snails and slugs. To those who are compelled to grow their whole stock in one house, we would offer the following advice:—Keep a free circulation of air by day at this period, and even all night, if possible, endeavour to have a good source of atmospheric moisture in the latter half of the day, and dispense with shading as much as possible. Many of the plants intended for winter flowering should be repotted and encouraged by all means. Continue the directions given in former calendars, and use all means to ripen and harden the shoots of succulent plants before the approach of winter. When plants of a softwooded nature are kept growing until winter approaches, their ruin is in most cases ensured. When plants are intended to bloom freely in the following season, their juices must be properly elaborated. Light and air are indispensable to effect this; a growth accomplished under these circumstances will be much more favourable for the production of blossom than that produced in a close and shaded stove.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

NEVER could there have been better weather for planting out all kinds of winter vegetables, as, after watering, the heavy showers obviated the necessity of further supplies. Watering was accordingly confined to such half-aquatics as Celery, and "running" in their case will, therefore, be reduced to a minimum, for dryness in the young and even the advanced state is the great cause of running in early Celery.

Some strong rows of Peas, notwithstanding the rains, showed

that they would be benefited by watering at the roots, as the heavy hail had thrown the rain too far from the bottom, and this was more likely to be the case when mulching was used to keep the moisture in the earth from escaping. There is no more fertile source of mildew in Peas than a dripping moist atmosphere in the autumn, and too much dryness at the roots. In such weather it is quite as important that the roots should be moist as in bright sunny weather, and in some cases even more so; as in dull moist weather less moisture rises from beneath to be partly appropriated by the roots as it passes.

From such a cause we have often seen more bolted Celery in a shady dripping season than in a dry and sunny one. We are also more apt to be lulled into a false security; for in gardening, appearances alone are often deceptive. We have examined Celery plants apparently flourishing, the moisture hanging late about the foliage before being evaporated, and yet the plants would throw up their seed-stalks even in such weather; and in almost every case, though the surface soil was moist, the mass of the roots might as well have been in a bed of dry ashes. Dryness at the roots greatly promotes seed-bearing, and this holds equally true whether applied to a Cabbage or a Pine Apple. Our skill must be directed to produce fecundity at the right time, so as to obtain the result we most want, whether that be foliage or fruit.

There are many old customs in gardening that are worth preserving. One of these is drenching the roots of all winter vegetables, after taking up carefully, in a thick paint formed of rotten dung, loam, and water, which prevents the roots suffering for the short time they are exposed before planting. What adheres of the mixture also gives an encouragement to the young roots to begin and work at once. There is a difficulty in making men attend to this simple matter, and the consequence is that basketsful of plants are taken up, and nearly withered before they are put into the earth, and some days' growth is thus frequently lost, notwithstanding all future waterings. A great object would be gained were the impression produced that no plant should suffer from changes more than it is possible to prevent. All plants in a growing state, before they change their quarters into fresh pots or into the open soil, are the better of having their tissues well supplied with moisture: hence the importance of planting in moist weather. Hence, too, the importance of every pot plant being well watered before it is transferred to a larger pot.

We not long ago met with an instance of what water can do. A large number of young Laurels were sent to a place in May. They had travelled in crates, and having had no drenching at the roots—no puddling, they were pretty well dried up. Part of these were taken away and planted as they were, and scarcely one of them ever made a green leaf. The others were placed for six hours, in turns, in large tubs filled with water, and of these, though many of their leaves dropped, scarcely one failed to make fine good growth.

Of course, when Cabbage and Broccoli plants are pricked out and lifted with a spade or trowel, the best policy is to take them up with balls, and these balls, though damp, not so wet as to cause the earth to fall from the roots. Such plants scarcely ever suffer from the moving. When taken direct from seed-beds the earth should be well watered, and instead of pulling at once, the soil, if at all hard, should be eased with the points of a fork, and then the roots dipped or puddled before planting. Need we add what has previously been insisted on, that one oblique stroke of the dibber is all that is necessary to fix the roots properly? A score of strokes will not do the work so well. Last autumn we were asked to look at a large plantation of winter stuff, that after repeated waterings looked as woe-begone as could be conceived. "They were carefully planted," we were told, and we could see the marks of the dibber as if from four to seven strokes had been used to every plant, and yet almost every plant was firmly hung by the neck, and the roots were mostly in a hollow, and therefore could not catch the earth until either that earth had been washed to them, or they had progressed enough to catch the earth at the sides of the hole. There is, then, something in the planting of a Cabbage. If the plant can be easily pulled up after planting, it is a sign the work has not been done; one oblique stroke of the dibber, and then brought towards the top of the plant, firms the soil about the roots, so that it is not an easy matter to pull up such a plant. This one stroke leaves a hole, and if that is an eyesore, merely pull the point of the dibber across the hole, the point bringing some earth with it, and that will fill it sufficiently, as, though not so firm as the rest of the ground, it will prove a better receptacle for the watering that

may be necessary. Thus, then, a little will be gained when it is understood that two strokes at the most from the dibber will do for planting any Cabbage—better, in fact, than twenty; just as in pointing small sticks for plants, two strokes of the knife will leave as good a point as if that point were whittled as carefully as would be required for a lady's bodkin.

FRUIT DEPARTMENT.

The rains have rather injured the Strawberries, and will render their season shorter. Those turned out from forced pots will afford some gatherings directly. These rains have so washed the bushes that we have never seen Currants and Gooseberries finer; and what is another great benefit, they have brought such numbers of snails and worms to the surface, that our blackbirds and thrushes have been moderate in their demands on us. We will not expect such armies again until the ground becomes hard, and soft food is scarce. We will proceed as soon as possible in placing a lot of Strawberry-runners in pots and beds. We are generally late in obtaining runners, and we are just preparing a little material in the shape of short grass and litter, and with that we will make a temporary bed with a little heat below it, and prick out the runners for future potting. Many people imagine that we have everything we want; but that is a great mistake, and a very general one, even as respects some of our largest and finest places. In many of these the most severe economy and the veriest makeshifts must be resorted to. These temporary beds of ours will be formed with the bole of a tree for the back and another for the front, sometimes with pots for back and front, with a rail from pot to pot, and a wisp of litter stuffed in between the rail and the soil, and then the bed will be covered with old eashes or a piece of calico—the latter when cheaper being one of the most useful materials in a garden; for many purposes, such as sheltering bedding plants, it is superior to glass.

We are behind with our fruit trees as to summer pruning, but as they are well loaded and showing plenty of fruit-buds, they will take less harm. The noise of the gun saved the buds in the garden. As a singular fact, we may mention that there are a few trees intended for a small orchard near the farm, and for years the produce has been next to nothing, though they are well supplied with buds every season; but no sooner do they begin to swell than armies of sparrows, &c., from the farm clear out every bud, and the number of the trees would not compensate for the trouble of watching them.

Melons in frames are not ripening so fast as they would have done in more sunny weather. All in such places should be elevated on tiles, slates, or pots to keep the fruit from the damp ground. Melons on trellises should have their fruit supported when a little more than half grown. Before that time we think they are the better of having to support their own weight. As a general rule, Melons on trellises are the best in flavour, though fine fruit is obtained from frames.

Turned out in frames and pits the last crop of Melons for the season, using large plants. In most places here they are very healthy, but in one small pit the leaves have turned yellowish before the fruit was perfected, and we would give something to know the cause. In a small piece of this pit, but shut off by a temporary division from the rest, some of these strong young plants were turned out a week ago, after cleaning the paint, renewing the soil, &c. The leaves in a day or two began to be affected, becoming yellowish at the edges, and then the yellowness spread gradually all over the larger leaves. The plants from the same place turned out into frames showed no such symptoms. Insects had nothing to do with it. We should have blamed scorching, but the back of the wall of the pit was coloured with soot and lime, so as to prevent any extra reflection of heat and light. The plants stood in a frame where there were a few Cucumbers in pots a little touched with the fly, and to clear them before planting, half a peck of bruised Laurel leaves was put in front of them, but not opposite the Melons. We know this is dangerous for Melons, and we would have thought the poison in the Laurel leaves that killed the fly might have injured the Melon plants, but for the fact that those taken a day or two later to frames showed no such symptoms, nor do the few plants still left. With all our care as to dulling the colour of the walls, in this little piece of a pit there have been similar symptoms as respects Melons all the season, whilst close to them are other plants green and in fine health. We will have another trial, and watch closely. Meanwhile we should be glad if any cause could be assigned. The plants received the usual treatment. We mention this, because something may have escaped our attention, and because we believe that failures are often as instructive as successes,

more especially when the causes can be traced, which we cannot do in the present instance. The large leaves have been removed from these transplanted plants, and we perceive that the smaller leaves near the points are becoming similarly affected. We may mention that the colouring of the wall was done with lime becoming quite mild; soot was mixed to tone down the colour, and air was left on night and day after the colouring. In some cases where we have mixed quicklime and sulphur for whitewashing, we have found it desirable not to set tender plants in the place for some days, unless plenty of air was left on at night. We may also mention that in a neighbouring pit where the leaves are all that could be desired, the colour of the walls was toned down in a similar way. In small places with the back wall exposed, we have long given up having the walls of a bright white in summer, to avoid the reflection of heat and light, which in such cases is so apt to burn. After the end of autumn we are as often glad to have the walls white to have all the light we can.

ORNAMENTAL DEPARTMENT.

We have done more here than elsewhere in fresh regulating plant-houses, and conservatories, potting, and cleaning, and putting the lawn and flower-beds in as fine a condition as possible, and if only sunny weather should come, we should have fine masses of bloom on a rich green carpet.—R. F.

COVENT GARDEN MARKET.—JULY 24.

As the London season declines, so do the prices of all forced produce, and we have now a supply far in excess of our requirements, of English Pine Apples in particular. Strawberries are nearly over, and Raspberries hardly worth sending to market. Continental supplies chiefly consist of Plums, Peaches, Nectarines, and Melons. The Potato trade is as before. Regents are very sound and good.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples $\frac{1}{2}$ sieve	3	0	4	0	Melons each	3	0	5	0
Apricots doz	3	0	4	0	Nectarines doz.	4	0	8	0
Cherries lb.	0	6	1	6	Oranges 100	8	0	14	0
Chestnuts bush.	0	0	0	0	Peaches doz.	6	0	10	0
Currants $\frac{1}{2}$ sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black doz.	5	0	6	0	Pine Apples lb.	4	0	0	0
Figs doz.	3	0	6	0	Plums $\frac{1}{2}$ sieve	5	0	7	0
Filberts lb.	0	0	0	0	Quinces doz.	0	0	0	0
Cobs lb.	0	9	1	6	Raspberries lb.	0	0	0	8
Gooseberries .. quart	0	4	0	6	Strawberries lb.	0	6	1	6
Grapes, Hothouse. lb.	2	6	6	0	Walnuts bush.	10	0	20	0
Lemons 100	8	0	12	0	Green.... per 100	1	6	2	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	3	0	6	Leeks bunch	0	3	0	0
Asparagus bundle	0	0	0	0	Lettuce.... per score	1	0	0	0
Beans, Kidney, $\frac{1}{2}$ sieve	4	0	5	0	Minshrooms... pottle	2	0	3	0
Scarlet Run. $\frac{1}{2}$ sieve	0	0	0	0	Minstd. & Cress, punnet	0	2	0	0
Beet, Red doz.	2	0	3	0	Onions... per doz. bush.	5	0	0	0
Broccoli bundle	2	0	3	0	Parsley.... per sieve	3	0	4	0
Brus. Sprouts $\frac{1}{2}$ sieve	0	0	0	0	Parsnips doz.	0	9	1	8
Cabbage doz.	1	0	1	6	Peas per quart	0	6	1	0
Capiscums 100	2	0	3	0	Potatoes bushel	4	0	8	0
Carrots bunch	0	6	0	8	Kidney do.	6	0	10	0
Canflower doz.	3	0	6	0	New lb.	0	2	0	0
Celery bundle	1	0	2	0	Radishes doz. bunches	0	9	1	0
Cucumbers each	0	4	0	8	Rhubarb bundle	0	4	0	0
pickling doz.	0	0	0	0	Savoy doz.	0	0	0	0
Eudive doz.	2	0	0	0	Ses-kale basket	0	0	0	0
Fennel bunch	0	3	0	0	Shallots lb.	0	8	0	3
Garlic lb.	0	8	1	0	Spinach bushel	2	0	3	0
Herbs bunch	0	3	0	0	Tomatoes... per doz.	2	0	3	0
Horseradish .. bundle	2	6	4	0	Turnips bunch	0	6	0	0

TRADE CATALOGUE RECEIVED.

Dillistone & Woodthorpe, Munro Nursery, Sible Hedingham and Braintree, Essex.—*Catalogue of New and Choice Plants.*

TO CORRESPONDENTS.

.. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

Kew Gardens (*Inquirer*).—There is no Committee of Management. Dr. Hooker is Director, and Mr. J. Smith, Curator.

PEA (J. B. H.).—The variety you sent to us is known as the Purple-podded Pea.

SEEDLING PELARGONIUM (John Deane).—The flower was quite shaded. The very crimson flame contrasts strikingly with the dead white of the ground colour; but no judgment can be formed from a single flower. Send a potted plant to the Floral Committee of the Royal Horticultural Society.

VARIATED PHLOX (Eps).—We do not remember having seen a variegated Phlox, but do not on that account consider it either rare or valuable. More variegations in plants have been brought to our notice this year than in any previous season, and next year most of those variegations will have passed away. Variegation of itself does not give value to a plant; its beauty or utility must be increased by the variegation, and the variegation must be permanent or it is valueless.

DOVE PLANT (G. M.).—If by this name you intend *Peristeria elata*, it is a stove Orchid, but cannot succeed in a warm greenhouse. If you write to any of the chief nurserymen, who advertise in our Journal, they will send you particulars of price, &c.

RED CURRANTS (A Subscriber from 1848).—Raby Castle, Victoria, and Goliath are synonyms of one and the same variety.

CUCUMBER (Barr & Sugden).—Your Cucumber called "International," of which you forwarded us a specimen, 24 inches long, is straight and handsome, rather too much neck, but, nevertheless, a very excellent variety.

DAHLIA TUBES (W. H. M.).—Next week.

VINEY, &c. (Amateur, Stoke).—You cannot have all advantages from any one plan. If you take the walk round the elage, though it should be narrower at the ends, you can walk round it. If the walk is on three sides, you must come back when you reach the division, unless you have a door there, when, of course, the objection does not apply, and you will do right in having your stage up to the division. You will be right whether you have a door or not, if you do not mind the turning back. Of course, you will gain all the width of the passage for stage. We would in addition to a build the walls c and e, so as to form the pit, and a wooden coping to these four-inch walls would be the best. Such a pit could be filled with fermenting material before starting the Vines, and would be useful for forwarding what you most liked; but we would not grow Cucumbers there below the Vines, as they might bring thrips and fly. Such a pit with a trellis over it might be filled with bedding and hardy greenhouse plants in winter, and after the Vines were in leaf, you could grow Mosses, Ferns, Caladiums, tender annuals, &c. It matters little whether your wall c be higher than a or not, but if higher you would require a sloping instead of a level stage in winter.

POTTING MARÉCHAL NIEL ROSE—PLANTING ROSES ON THE MANETTI STOCK (C. T.).—You may place this Rose in a larger-sized pot at the end of September and any time afterwards up to November, using a compost of one-half turfy loam and one-half well-rotted manure and leaf mould in equal proportions, adding sand liberally. Good drainage is essential, and the soil should be used rather rough. In planting Roses on the Manetti stock they should be covered with soil an inch or two deeper than the bud, or the junction of the bud or graft with the stock should be covered with soil, but not deeper than 3 inches.

CAMELLIAS UNHEALTHY (Flora).—The part of the stem sent is badly infested with a fungus; but that is not the cause of the plants' dying. The parasite is only what may be found on the stems of all plants infested with coccus or scale, which you may remove with the point of a knife, and afterwards wash clean the leaves and stems with a sponge, using a solution of 4 ozs. of soft soap to a gallon of water. Syringe with water at 140°. The painting of the house is injurious to plants at this season, and the soda water you name, if strong, will destroy what it falls upon. Wash the Myrtles forcibly with a syringe, repeating this washing twice or thrice in the course of a week, using a solution of soft soap at the rate of 2 ozs. to a gallon of water, and afterwards set them out of doors, taking care to keep them well watered, but not in a saturated condition. Take them in doors in September.

CLIMBING DEVONIENSIS ROSE NOT FLOWERING (E. G. H.).—The fact of your Rose being cut off to within 2 feet of the ground is in a measure sufficient to account for its not flowering. We suppose your plant is against a wall, and if so, and in good rich soil, with the mere removal of the tips of the shoots it will in a short time flower freely. All it appears to want with you is growth, and to this end a top-dressing of manure in autumn will do good, the watering being copious during dry weather in summer.

VAPOR FROM HOT-WATER PIPES (C. S.).—It is a very common practice to sprinkle water on the hot-water pipes during the forcing of Vines; and when the pipes are not very hot, doing so, as well as sprinkling every available surface twice or thrice a-day, is not injurious; but if the pipes are very hot sprinkling them is calculated to do more harm than good.

TRAINING FRUIT TREES UPON ROOFS (J. C.).—Your proposed training is novel, and not likely to answer for the Peach, Nectarine, and Apricot trees, though it may do for Pear and Plum trees; but we apprehend the shoots of these will be difficult of training, and that their leaves will very soon injure the roof. The best trellising is galvanised wire, as you propose, but we think your chances of a crop are very small in respect of the Peach, Nectarine, and Apricot trees, which would be better kept on the nine-foot wall. The covering of your farm-yard with galvanised wire netting will not injure the lower parts of the trees unless the mesh of the netting be small, when it will interfere with their fruitfulness on account of the sun's rays being obstructed. As the trees are young we advise you to remove them, and to plant standards, with stems of the height at which the wire is fixed, providing you see your way to get at the branches for the purposes of pruning and training.

OXALIS CORNICULATA RUBRA (Perplex).—It is easily propagated from seed sown early in March and placed in a gentle heat; or a few good plants taken up in autumn, planted in a cold frame or pit in a dry, sheltered situation, and treated like *Calcicolaria*, will in March furnish a number of running shoots. These, if taken off with the points, or even with only two or three joints, potted in small pots or set in soil at 2 or 3 inches apart, with or without heat, will soon become good plants; but

they succeed best with a mild bottom heat. In dry, gravelly soils this *Oxalis* is quite hardy, seeding on the walks, from which the plants are not easily eradicated.

LILIUM GIGANTEUM OFFSETS (An Irish Subscriber).—It is usual for this plant after flowering to throw up offsets or suckers, which should be removed and potted off singly, and these in their turn will flower and give their quota of offsets.

WATERING VINES (A Constant Reader).—Now that the Grapes are swelling a good watering would do good; but if they are coloured it will not be of service. You should have given at least three good waterings; one when the fruit was set, when about half swelled, and again a short time before they changed colour.

MARKET PEAS (Novice).—Advancer, and a few days later Voitch's Perfection.

ERADICATING DANDELIONS FROM A LAWN (Young Amateur).—As the weather is now moist dig them up with a Dock-spd, which you can obtain of any ironmonger, and there is still time for the turf closing in around the openings; or you may defer it till spring, when you may take them up as soon as you can discern them. Usually they die by frequent cutting, and they are not often troublesome in lawns frequently mown. Daisies and Plantains are more difficult to deal with. We have seen the latter as well as Dandelions cut off just under the surface early in spring, and a pinch of salt applied to the root that was left; but the plants sent up suckers laterally, so that the evil was not much diminished.

TAKING TWO CROPS OF HAY IN A YEAR (Idem).—Unless the land is naturally good two crops of hay will be found very exhausting, and heavy and expensive manuring will be necessary to enable it to support such a drain on its resources. In districts where two crops are cut it is usual to manure with well-rotted dung or compost in a tolerably pulverised condition between the crops—say in the middle of July; otherwise, where irrigation is available, that means is adopted to renovate the ground. In your case we should think a good dressing of nitrate of soda between the two crops would be most easily applied, and would cause no trouble nor annoyance; but if you continue to expect two crops each year you must apply a more bulky manure in winter. As you say your soil is thin and resting on the red sandstone, we would advise you to collect as much road scrapings as you can, together with all scourings of ponds, ditches, &c. If these can be brought together in summer, dung mixed with them, and the whole turned once or twice, the heap may be laid on before Christmas at the rate of at least twenty one-horse cartloads per acre, spread over the surface, and harrowed in during winter. Such dressings help to destroy the moss; but if the soil is at all inclined to be of a clayey nature, let lime be mixed with the ditch-parings and turfy matters. We would not lime, however, where iron prevails, and this we expect is the case in the soil you describe. We hardly think it is worth while sowing Italian Rye Grass on an existing pasture as you describe, but we would sow a little Clover; and we must remind you that taking two crops of hay in one season is unfavourable to the finer pasture Grasses doing well, as in most cases where this is practised the coarser Grasses only prevail, many of the finer Grasses being destroyed by their more rampant brethren.

DISEASED GRAPES (T. P.).—The berries of Lady Downe's Grape you enclosed are very badly spotted. It usually arises from defective root-acton. If the roots can be kept warmer and watered occasionally with weak tepid liquid manure, and more air admitted, the disease may be arrested. Pick off the diseased berries as soon as detected, but the disease is not infectious.

POTTING AZALEAS (A Constant Reader).—It is not too late to pot Azaleas after they have made their growth, care being taken not to injure the roots, and not to over-pot.

TACSONIA VAN-VOLXEMI TREATMENT (T. H.).—Your plant should be put to rest in autumn, and kept dry at the root during the winter. About the middle of February it should be pruned, and may be repotted, removing most of the old soil, and have a less-sized pot. A compost of two-thirds light turfy loam, and one-third leaf mould, with a free admixture of silver sand will grow it well, free drainage being provided. The pot should be placed in a gentle hotbed, the soil being kept only just moist until growth fairly commences, when the watering should be more plentiful. When the pot becomes filled with roots, the plant should have a shift into the pot in which it is to bloom, and be again plunged in the hotbed until it recovers from the potting, when it may be gradually withdrawn from the bed. The atmosphere should be moist, and the roots must not suffer from want of water, but a saturated soil is bad. The shoots should be regulated upon the wire frequently, and must not be too much crowded. It cannot have too much light, and free ventilation is essential. It does admirably in a warm greenhouse. So far as we know it will not survive the winter and bloom out of doors even against a wall, but we have not tried it.

STRAWBERRIES ON A SLOPING BANK (W. K.).—We think that if you give the Strawberries time they will bear fruit, especially if you afford a good mulching of littery manure in June, and water them during dry weather. Raspberries would probably succeed if the situation is not too much exposed, and the ground might, by being dug up and left rough through the winter, be made suitable for sowing with Grass seeds next April. You may sow *Festuca duriuscula*, 4 lbs.; *Cynosurus cristatus*, 8 lbs.; *Festuca tenuifolia*, 2 lbs.; *Poa nemoralis*, 2 lbs.; *Poa trivialis*, 3 lbs.; *Lolium perenne*, 24 lbs.; *Trifolium repens*, 8 lbs.; and *Trifolium minus*, 4 lbs. The above quantity is for an acre of ground.

ROSES ON LIGHT SOIL (P. M. N.).—Your soil being light it is hardly possible to manure it too heavily. We recommend a good dressing of manure in November to be left on the surface, and neatly pointed-in in spring, when you may apply a dressing of soot between the plants, making the soil quite black. If you were to hoe the ground in a day or two afterwards, put on a mulching of short littery manure 3 inches thick, and give copious waterings in dry weather, you would have Roses for bouquets in plenty. These named in the "Garden Manual" will suit you.

NAMES OF PLANTS (A. Robertson).—We cannot undertake to name varieties, nor so many, and not unless each specimen is numbered. (*Mrs Smythe*).—*Philadelphus speciosus*. (*John*).—*Deutzia scabra*. (*I. H. B.*).—1, *Spiraea ulmaria*; 2, *Hypericum perforatum*; 3, *Aspidium Filix-femina*; 4, *Allosorus crispus*; 5, *Aspidium spinulosum*; 6, *Aspidium* sp. (*A. K.*).—*Erica cinethoides*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending July 23rd

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 17	29.727	29.623	70	56	62	60	W.	.32	Masses of white clouds; boisterous; cloudy at night.
Thurs. 18	29.577	29.487	68	54	63	60	W.	.06	Rain; low white clouds; fine.
Fri. . 19	29.743	29.574	65	52	62	59	W.	.01	Cloudy and boisterous; overcast; cloudy.
Sat. . 20	29.802	29.682	70	52	62	59	W.	.13	Clear; partially clouded; rain at night.
Sun. . 21	29.643	29.605	72	51	63	59	S.W.	.02	Cloudy; cloudy throughout.
Mon. . 22	29.672	29.651	74	53	64	60	S.	.20	Cloudy; fine, with white clouds; rain.
Tues. . 23	29.612	29.598	72	48	64	60	S.	.02	Cloudy; showery; heavy showers at night.
Mean	29.682	29.603	70.14	52.29	62.86	59.57	..	0.76	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

FAILURES IN GAME BANTAM BREEDING THIS SEASON.

IN answer to "NOTTINGHAMSHIRE," I am sorry to say that I am one of those unfortunate sufferers with my fowls; I never had such mortality amongst my fowls since I have been a breeder. I have had hatched this season about sixty chickens, and now (July 16th), have twenty living. During the last six days I have lost sixteen. The place in which I keep them is a pen about 5 yards long and 3 wide, and I let them run out to catch the morning sun, and in the afternoon they are in the pen. They are always on dry soil. No grass run.

I had eleven chickens in one clutch, and when five days old they began to fail just in the same way as "NOTTINGHAMSHIRE" describes, being affected with purging, loss of appetite, drooping the wings, and swelling behind, and they became too weak to follow the hen. When I have seen them in this state I have placed them in flannel at the side of the fire, but I have never been able to bring one round. In the next pen to the eleven I had another hen with eight chickens. When about ten days old they failed similarly, and I have two left out of the eight. The malady seems to me to be infectious.

The diet of the chickens has been meal, bread and ale, and egg chopped fine. To each of them when attacked I gave two nights successively, a pill containing prepared chalk, cayenne, and citrate of iron, but it had no effect.

I have a clutch of Hamburgs all right, and doing well. I have also a clutch of chickens on a grass run all doing well, and at the same place my friend has lost nineteen Hamburg chicks with the same disease. If any of my brother poultry breeders could state a remedy I should feel greatly obliged.
—DERBYSHIRE.

I AM glad that your correspondents "YORKSHIRE" and "NOTTINGHAMSHIRE" have brought before the readers of "our Journal" the mortality of Game chickens. I can quite indorse all they have said. I know of no breeder of Game fowls who has been successful this year.

In my own case, I may say that the number of chicks reared in comparison with the number of eggs set upon is very small—I should think not more than ten per cent., and this applies as much to Game Bantams as to other Game fowls.

I will state my own observations on this most vexatious disease. The first symptom I observe is a very early shooting of the wing feathers, and when about nine days old the crop becomes soft and slightly enlarged, or, as an old breeder expresses it, "their craw gets puggey," their wings drop, and a few days end their existence.

Now for the remedy. I have tried all the recipes I could think of, but without the slightest success. When once the chick has been attacked I have neither found nor heard of the slightest good being effected. I believe that this disease is worse on grass walks than on gravel or lime walks. I thought once that it might arise from fowls being reared on the same walks for years, but on moving them to fresh walks and pastures the same failure takes place.

Had this disease occurred in a few yards I should have thought nothing of it, but I believe it to be general. I hear of no one in England who has had good luck with Game chickens. Only this morning I hear from a friend in Staffordshire that his success has been very little, not having reared 25 per cent. of the chickens hatched.

I hope that some of our poultry-keepers will be able to throw

light on this matter, for I think the coming year will find us with a very limited supply of Game chickens.

Has this disease, do you think, been occasioned by the very changeable weather? I think not; neither do I think it is the weakened constitution of Game fowls, although I am willing to admit that Game are the only fowls that seem to have suffered, most if not all other breeds having pretty good broods.
—W. C., Nantwich.

THE PROPER WEIGHT FOR GAME FOWLS AT EXHIBITIONS.

THE average weight of Game cocks at exhibitions is now about 6½ lbs., and runs from 6 lbs. to 7½ lbs. The old favourite fighting weight was 4½ lbs., especially at the Royal Cockpit, Tufston Street, Westminster, London; and 4½ lbs. is allowed to be the most active weight of all, and large enough for strength. The weight best combining activity with strength is, on the whole, 5½ lbs., and this is my favourite weight for brood cocks. I think that when weighing more than 5½ lbs., Game cocks begin to lose symmetry, and become too slow, heavy, and often clumsy.

Game cocks are, of course, never weighed at exhibitions, and I think our poultry judges are mainly to be blamed for not checking the undue and great advance in the weight of Game fowls. Such large fine birds are undoubtedly noble specimens, but are never so sharp, fierce, or active as those of the middle size, and, though much more powerful in appearance, would soon be killed by active sharp birds. We do not want Game fowls to approach the size of Dorkings, at least no true Game fancier would wish them to do so, and with all their noble appearance such large Game cocks are slow, heavy in flesh and bone, often clumsy, and even resembling Malays. I hold that 5½ lbs., or 1 lb. more than the highest fighting weight, is about the most correct exhibition weight, and that 3½ lbs. for exhibition hens is correct, as 4 lbs. hens are all slow and breed slow cocks. (Hens, of course, are heavier when full of eggs than at other times.) A few years ago the 5½ lbs. birds took all the cups and prizes, but now we seem to have advanced another pound in weight. If the Game judges do not combine to check and discountenance this approach to "Dorking clumsiness," in a few years we shall not see a quick, sharp, fiery, symmetrical, or really "Game" cock at any of our exhibitions. I prefer the old "cocker's" way of breeding, and breed my Game fowls strictly in accordance with the old usages, and not for large, heavy, exhibition birds; brood cocks, 5½ lbs.; cocks on "out-walks," 4½ lbs. each; hens from 3 lbs. to 3½ lbs., no heavier.

All the chief exhibitors seem to have their birds too heavy both in flesh and bone for really good birds. A heavy Game cock is far inferior to a light active bird, and judges should remember that these large birds, heavy in flesh, and coarse in bone, should never take prizes, and the judges should give the prizes to middle-sized birds, fine in bone, and also fine and active in shape. I do not write as an exhibitor, as I never have exhibited since 1857, and do not mean to exhibit again. I had several large cocks weighing from 6 lbs. to 7 lbs., and they were all heavy slow birds with one exception. These were Black-breasted Reds and one Brown Red. I hear that in Yorkshire and Staffordshire, in some places, they have Brown Reds weighing as much as 9 lbs., and Black-breasted Reds and Duck-weights of 8 lbs., bred for exhibition purposes, or for farmyards. Judges surely know that Game cocks "like Dorkings" are not required even for exhibition. I think that while judging, the weights of the larger breeds must run too much in their heads.

Strong, active, fierce, fine-boned, and symmetrical high-bred birds are the true cup birds in Game fowls. I have only seen one good large bird exhibited yet.—NEWMARKET.

MANCHESTER AND LIVERPOOL CENTENARY EXHIBITION.

ONE hundred years of age! Truly it is a great ago, and we heartily wish that the aged individual may survive the throes of the approaching excitement; yet surely there are most alarming symptoms of second infancy, or even of a more dangerous condition. Let us turn to the prize schedule and examine for ourselves. I sent for it in the hope that at one hundred years of age I could surely take a notch or two from it, enter in every possible shape, even though I won nothing! I of course allude only to the portion that interests us—poultry. I expected to find a great variety of classes and a faultless schedule. Who would not after the experience of a hundred years?

The Show is for produce of 1867. To this there is no possible objection; but the schedule as regards poultry is headed thus:—"By the rules of the Society poultry must be sent in charge of some person to the Show, and who will take charge of and be responsible for it when the Show is over." Such a regulation as this must defeat itself. None but the largest poultry breeders could do this; and if the attendant is to stop four days in Manchester, a small portion of the gilt would certainly be taken off the prize money by his expenses. To carry out this regulation would, I imagine, greatly limit the entries. Such an idea would seem to have presented itself to the framers of the prize list, as there is an addition that "there will be an assistant appointed to receive," &c. For this, however, every exhibitor will have to pay "2s. per pen extra!" Now, I contend that to place all exhibitors on equal terms, no servant or person in charge of poultry should have access to the interior of the Exhibition until after the Judges have awarded the prizes. The less wealthy exhibitors should have an equal chance, and there is a variety of ways in which an interested party can improve his position if he have access to the interior of the Exhibition, and yet not mean to set in any way dishonestly. The above position is, I believe, sound, and would meet the views of the great body of exhibitors.

The prizes are liberal, but at many even of the minor exhibitions—the Basingstoke Agricultural, for example, Brahmas are divided into Light and Dark. At this grand centenary in the year of grace 1867 they are exhibited together, although Dorkings have ten and Game fifteen prizes; but, as though insult must be added to injury, this, now most decidedly one of the very popular breeds in the country, and one that is entered more than respectfully at every exhibition, is offered smaller prizes.

This, however, is not the great blot of the "centenary schedule." Will any north-country breeder believe the evidence of his senses when he finds that there is no class either for Gold or Silver-spangled Hamburgs? To make amends for this, there is a class and equal money offered to Black Hamburgs. Well, I do not doubt that many exhibitors of the French breeds expected, and, I confess, with justice, classes for these fowls. Where are they? Echo answers, "Where?" These, Spangled Hamburgs, Malays, &c., have three comparatively small prizes offered between them!

I also regret very much the two hens necessary for a pen; there is no question that it will lessen the entries. The single hen is now becoming the rule and not the exception, and all the poor birds included, rejoice at it; but when we arrive at our hundredth year perhaps we may see differently.

I will only notice one of the concluding regulations—"All pens will be disqualified if the plumage of the birds shall have been trimmed," &c. How will the Game and Spanish enjoy the thorough carrying out of this rule?

I can only add that I trust the centenary of many other societies may be attended with a prize schedule more in accordance with the requirements of the day than is that of the grand centenary, in which I doubt not many other breeders as well as I have been so grievously disappointed.—Y. B. A. Z.

POULTRY SHOW AT WESTON-SUPER-MARE.—I think I may state on tolerably certain authority that there is to be a poultry show in connection with the horticultural exhibition at Weston-super-Mare about the 15th of August. It is a first attempt,

the prelude, I trust, to many annual exhibitions, and I hope it will be well supported by fanciers in the southern and western counties. The schedules and forms of entry will soon be in print.—Y. B. A. Z.

POULTRY AT THE ROYAL AGRICULTURAL SHOW AT BURY ST. EDMUNDS.

"THERE always is something, I declare," says Mrs. Balderstone, "whenever I make up my mind to enjoy myself." So there was at Bury St. Edmunds. We went down with the past alive in our memories. The goodly row of pens well tenanted testified to the desire of the *élite* to gain one of the Royal prizes. We thought of what we had so often seen—the mighty collection of stock and implements; the urbane, practised, and efficient staff; the daily growing number of visitors; and the hot but pleasant summer weather that made a retreat under canvas very desirable from time to time. These added to the space enclosed, and the facilities for obtaining everything that was needed, gave it the character of a *fête champêtre* held in an enclosed park. Sunday gave an earnest of the weather to be expected at Bury. All the elements were let loose; wind, thunder, and lightning, rain, hail, and tempest. Streets were converted into rivers, and hailstones had to be shovelled off roofs and out of gutters. There was comfort in the idea that it would probably clear off and ensure fine weather. We ventured to say so to one of the "oldest inhabitants" whom we met while we were strolling about the churchyard; but he answered us rather testily. "Ah!" said he, "you don't know Bury. There never was a fine day yet for a public meeting, or for a public occasion of any kind." We were discouraged, and thought we would quietly pass on; we essayed to do so, but were not let off so easily; the old inhabitant gave chase, overtook us, and touching our elbow, said, "It will be a wet week; I'll bet anything of it." He was right in this instance; we had most abominable weather, casting gloom over that which otherwise would have been a charming treat.

The locality was well chosen, being separated only by the river from the Abbey gardens. A most essential point that cannot be over-rated was here attained: it was close to two railway stations. It was a very beautiful sight from the railway on the road to Ipswich. The long rows of covered sheds filled with stock or implements, the different tents and offices gaily decorated with the colours of all the nations that over were and those that have never existed. The long rows of stabling, and the circles or ring in which the horses of different breeds showed their proficiency in their varied characteristics, and last, not least, the poultry. Beyond this the beautiful Abbey gardens and the extensive ground still nearly encircled by the remains of this noble pile. We doubt not if such institutions were still extant we should find the inmates among our best poultry amateurs and exhibitors. Throughout the Continent, at all the large monasteries, Pheasants, fowls, and Rabbits are bred by the brethren, and we are in a position to affirm they are clever and successful in the pursuit.

We are bound to thank the Royal Agricultural Society of England for again calling the attention of those whom they most seek to benefit to the merits of poultry. Hundreds in Surrey, Sussex, and Kent for fowls, Bucks and Oxon for Ducks, may tell of the large sums they have received this year. For weeks *à la*, each was an average price for both; exceptions in favour of a higher price were common, and even the ill-fed and worse-bred Irish chickens sold at 3s. each. Fowls are not extravagant eaters, they are not expensive to rear, half the food they consume would be wasted if they did not eat it. Eggs alone will pay for their food. They are vigorous destroyers of all grubs, worms, and other creepers on the surface of the earth. They search for and devour those that hide and burrow beneath it. They are always turning over the surface. The time must come when an effort will be made to keep at home the millions that are sent abroad, and it will be effected by the instrumentality of such societies as this.

The first class was that for Coloured *Dorkings*, numerous and good. In this, as in many other classes, the good feather of the birds was remarkable; considering that many regard the north of England as unfavourable for this breed, it is astonishing how many first prizes in the teeth of great competition with the south go into those parts. The first prize went to Staffordshire; the second and third stayed nearer home, they went into Essex. The show of chickens was wonderful considering the season. The prizes went to Sussex, Essex, and Bucks. In these we have again to remark on the carelessness that seems to guide the choice of exhibitors when they take birds with legs that almost amount to deformity. Twenty-eight pens of good dark *Brahmas* justified the prizes offered for them. We can speak highly of them. They answered the call of the Society from all parts. In proof thereof, we notice the first prize went to Ireland, the second to Aberdeen, the third to Yorkshire. Light *Brahmas*, fewer in numbers, took prizes to Surrey, Essex, and Kent.

The Buff *Cochins* put us in mind of numbers and quality of the olden times. There were beautiful birds among them. Sheffield had the first, Birmingham the second, and Essex took the third. These birds were in capital feather; they were also honestly shown. In other *Cochins* the Grouse were better than the White; some of the former were excellent.

Grève Cœur and *La Flèche* came to us from France with the reputation of being marvellous layers, also excellent for the table. The

Royal Agricultural Society of England, bearing in mind the importation of 400,000,000 of eggs annually, offered liberal prizes for the three best known French breeds. Good birds were shown in every class, and it is probable that if many more had been exhibited the awards would have been the same as regards the first prizes, but the entries were disappointing in numbers. The *Houdans* were more numerous than both the others put together.

Spanish were very good. All the prizes went to the north. The *Game* showed the Brown Reds in great perfection. In size, colour, shape, and handling they were perfect. We greatly admired the chickens shown by Mr. Wood; they will be hard to beat when they are adults. The Black Reds and Duckwings were good, but we did not think the Piles up to the mark.

Both in Spangled and Pencilled the Golden were better than the Silver *Hamburghs*. The Golden-spangled were very strong.

There were thirty-seven pens of *Bantams* entered. The *Game* were not so good as we have seen, although the prize pens were not without merit. In the Bantam variety class we greatly admired the first-prize Buff *Cochins*. We also much admired two pens of Indian *Bantams* belonging to Sir E. C. Kerrison.

Nothing could improve the quality of the *Turkeys* shown, but the entries were not so numerous as they should have been for the prizes offered. The three first pens in the prize list were of unusual weight. We may say the same of the *Geese*. Nothing need be better, but there should have been more entries. The *Ducks* were numerous, but not sufficiently meritorious to call for remark.

Many good pens arrived too late for competition, and were labelled to that effect. We published last week the prize list and the names of the Judges.

It is unnecessary to add that all connected with the Society were zealous in the discharge of their duties. We know no other so fortunate in its selection of officers.

BUDE POULTRY SHOW.

THIS was held at Bude Haven, Cornwall, on the 19th inst. The following are the awards:—

DORKINGS (Coloured).—First and Second, Rev. A. C. Thynne. Third, Rev. J. R. Whyte. Fourth, J. Brock. **Cock**.—First, J. Tarrett. Second, J. Bines. **Chickens**.—First and Second, Rev. A. C. Thynne.

SPANISH.—First, J. H. Reed. Second, W. Leach. **Chickens**.—First, J. Reed. Second, H. M. Bazley.

GAME.—First, W. H. B. Coham. Second, J. Francis. Third, J. Joco. **Chickens**.—First and Second, W. H. B. Coham.

COCHIN-CHINAS.—Prize, W. L. Trewin.

BRAHMAS.—First, J. H. Reed. Second, Rev. C. N. Sillifant.

MALAYS.—First and Second, H. Darch.

CORNISH.—First and Second, D. Maynard.

HAMBURGHS (Golden-pencilled).—First and Second, J. F. Delmar.

HAMBURGHS (Golden-spangled).—First and Second, J. F. Delmar.

HAMBURGHS (Silver-pencilled).—First and Second, J. Walter.

HAMBURGHS (Silver-spangled).—First and Second, W. M. Lancaster.

HAMBURGHS (Golden-pencilled and silver-pencilled).—*Chickens*.—Prize, J. F. Delmar.

POLANDS (Golden-spangled).—First, F. Barrett. Second, A. Wonnacott.

POLANDS (Black).—Prize, W. L. Trewin.

BARNDORF FOWL.—First and Second, H. Francis. Third, W. J. Lyle.

Fourth, T. Glass. **Fifth**, J. B. Lyle.

BANTAMS (White).—First, S. Lyle. Second, T. M. Medland.

BANTAMS (Black).—First and Second, H. M. Bazley.

GUINEA FOWLS.—Prize, W. M. Lancaster.

DUCKS (Aylesbury).—First, J. Bines. Second, W. Bines. **Ducklings**.—Prize, Rev. T. S. Carnsew.

DUCK (Common).—First, T. Pickard. Second and Fourth, J. R. Cotton. Third, G. Piper. **Ducklings**.—First, T. Shephard. Second, J. Bines. Third, W. Paddon.

DUCKS (Ronen).—Prize, Rev. R. R. Wright.

GESE.—First, J. Sanders. Second and Third, — Sandrey.

TURKEYS.—First, J. Heal. Second, H. Heal. Third, — Risdon.

PICREONS.—First, J. M. Braund. Second, J. Heal. Third, T. Medland.

Borbs, *Pouters*, *Fantails*, *Jacobins*, and *Turbits*.—Prizes, J. M. Braund.

Trumpeters, *Tumblers*, and *Nuns*.—Prizes, Rev. J. R. Whyte.

RABBITS.—*Long-eared*.—Prize, W. Gist. *Common*.—First, H. Sanders. Second, R. Francis.

EXTRA PRIZES.—*Any Pure Breed*.—First, T. Wood (Ancenas). Second, Rev. C. H. Sillifant (Black *Cochins*). *Cock*.—First, J. H. Reed (Spanish). Second, A. West (Game). Third, H. Darch (Malay).

EXTRA PRIZES GIVEN BY WILLIAM MASEKELL, ESQ.—First, J. Stanbury. Second, J. Penfound.

THE SEX OF EGGS.

You may smile, Messrs. Editors, at my simplicity in attributing a gender to eggs; but, of course, you know what I mean—the sex of the chickens which the eggs will produce. This season I have been unfortunate in having a preponderance of male birds, and on mentioning the matter to an elderly lady friend who has had great experience in the rearing of poultry, she informed me that it is as easy to detect the sex of eggs as it is to detect the sex of grown birds, and that before she retired from her farm she took care that all her early chickens were pullets and her late ones cockerels, the latter being more valuable in the market. Her mode of ascertaining was this:—

She took the eggs into a dark room and held them separately in front of a lighted candle, thick end upwards, and on placing her eye against the egg the fertilising agent could be very clearly perceived. If this was exactly at the top of the egg a male chicken would be produced; if on one side, a female. I intend trying the experiment another season, and, probably, some of your subscribers who may have been equally unfortunate with myself may be induced to do likewise.—LINDUM.

MAJOR MUNN'S BAR-FRAME HIVE.

In your reply to "WAX" in your last number, I observe the statement that "Major Munn's three-cornered frames were hinged to the hive, and were not interchangeable." Now, I think this matter ought to be put right as early as possible; and I, being pretty well acquainted with the hive referred to, beg to state to your numerous readers, that one of the main features in Major Munn's bar-and-frame hive is, that the frames are interchangeable—just as much so as Huber's, Baron Von Berlepsch's, or the Langstroth hives.

Major Munn's hive is not generally made with the frames "hinged to the hive;" and the only one I ever saw with hinges to the frames is in the Edinburgh Museum, and these hinges do not at all interfere with the interchangeability of the frames.—SUDBURY.

[We only spoke of Major Munn's hive as we had seen it, and were not aware that alterations had been made in its construction.]

HONEY HARVEST.

I AM sorry to see in "our Journal" so many complaints of the bad honey harvest this year. The early part of the season was, no doubt, very unfavourable for honey gathering, but I think that those of your correspondents who expected such a famine in their hives when they wrote a few weeks ago will be able to send a much more satisfactory report now.

During the recent hot weather honeydew has been very abundant on the oak trees, and the bees have made good use of it. I was surprised to see in your number for June 27th a doubt expressed that bees benefited directly from honeydew. I have studied considerably the sources from which they collect their food, and am convinced that when honeydew is abundant (which, however, does not frequently occur), it affords them a more plentiful harvest than any flowers. I have seen hundreds of bees on a single oak tree licking the saccharine matter from its leaves; but when I consider that there are, perhaps, as many oak trees as bees in the country, I am not surprised that the latter have not often been noticed on them, and that, consequently, people are incredulous as to bees procuring honey from this source.

I have several beautiful supers, containing, perhaps, 20 lbs. each, all collected within the last month. I had no swarm until the end of June, but one has given me a splendid glass of about 6 lbs. already.—AN ISLE OF WIGHT BEE-KEEPER.

BEES ENTERING SUPERS.

Wishing to effect this, I this year placed supers on two stocks, when, by increase of the number of bees and fine weather, it seemed advisable to give them room, so as to try to prevent swarming. The weather afterwards became cold, so I shut off the bees from the supers until it became fine again, as they had not yet made much comb. This practice I carried on during the changes of temperature until the bees seemed securely at home in the supers, and now these are nearly filled. I may add that each time the sides were removed to allow the bees to pass up, I put honey in the guide-combs, and slightly smeared the sides of the supers (which are of wood), with a little honey.

There may be nothing new in this plan, but it having been successful, I venture to bring it under the notice of the readers of "our Journal."—C. A. J.

SUCCESS IN HATCHING.—In one of my first hatches of chickens this season a *Cochin* hen brought off nineteen chickens out of nineteen eggs, and a twentieth, which was laid to the others a week after sitting, had a chicken in it also.—J. R. ALDRED.

VAGARIES OF BEES.

HAVING a somewhat singular case in my apiary, I shall be glad of your opinion as to how it can be accounted for. My stock at the commencement of the season I will call in the order in which they were:—Nos. 1, 2, 3, 4, 5, 7, 8, 9, 10.

No. 4 was very strong in February and March, but soon lost its strength unaccountably, so that I determined to drive the bees and unite them to a swarm on the first opportunity. Nos. 7 and 10 swarmed June 26th, and I united them in the evening, placing them in a Woodbury-hive, No. 6. (This is now quite full of honey, and the bees have commenced building in a Woodbury super.) On July 10th, No. 1 swarmed, and in the evening I drove No. 4, sprinkled both lots, and united them in No. 8. When I took out the comb from No. 4, I found the queen quite alone (I have reason to believe that she was a young queen raised last year), and only about 150 or 200 cells occupied with brood, part worker and part drone in worker cells, with very few eggs, and they adhering to the side instead of the bottom of the cells. I intended to forward the queen to you but she was accidentally lost. Next morning (July 11th), the bees in No. 8 left the hive and joined No. 7, which had swarmed fifteen days previously, and had given no intimation of casting, and I found the queen of No. 8 encased and dead. About 2 p.m. the same day they rose again from No. 7, and I bived them in a Woodbury, placing it where No. 4 was, and they are doing well.

Now comes the curious part of it. There are three or four queens piping in No. 7 to-night (July 17th), twenty-one days after the issue of the first swarm, and six days after the second. My impression is, that the young queen must have been mature at the time of the first swarm, and that she must have been preparing to swarm at the time the strangers joined them, though even then it leaves no time for her impregnation, or between that and commencing laying. Can you enlighten me or suggest a more probable solution?—SHERWOOD FORESTER.

[We think it most likely that the deserted queen found in No. 4 was a drone-breeder, and that what you supposed to be worker-brood was really unsealed drone-brood in worker-cells. Could you have sent us the queen, a post mortem examination would at once have decided the point. The conjoined bees in No. 8 appear to have been placed too near No. 7, and the returning bees from the former having raised what the Germans call the "swarm-tune," probably attracted stragglers from the latter, and this immigration set on foot the regicidal attack which resulted in the death of the queen of No. 8, and the subsequent voluntary union which took place. The fact of young queens piping twenty-one days after the issue of the first swarm is remarkable, but not altogether inexplicable. We have known a queen hatched so late as the twentieth or twenty-first day after the removal of the old one, and assuming Huber to be, as we believe him to be, correct in his statement that young queens are often confined to their cells for some time after they have arrived at maturity, the delay is not so extraordinary as might at first sight appear.

We shall be glad to receive an account of your attempt at propagating Ligurians.]

BEES IN PERTSHIRE.

THIS season in Scotland has been the most unpropitious and disastrous to bees which has ever come under my notice. The one half of my apiary has perished. Some colonies have died of starvation, others of sheer diminution of numbers, owing to the queen's not breeding, though having abundance of stores. The bees have literally been confined to their hives (with the exception of some weeks), from September, 1866, to June, 1867, without being able to collect honey or farina. Even yet the season is unfavourable, and throughout the whole of this district there are only two or three natural swarms.

Two Ligurian queens, which were sent me by Mr. Woodbury, having been put into strong hives last October, survived the winter and began to breed beautifully marked bees in spring; but, like many of my black colonies, owing to the inclemency of the spring, they did not multiply very rapidly, and, indeed, become stationary, or rather began to decline. I supplied them with food, but, looking into the interior of one of the hives one frosty morning, I found the whole of the bees a benumbed and inanimate mass. I immediately transferred the hive to a warm room, and in the course of an hour or two they were all apparently resuscitated and restored to life and motion. I gave

them a supply of syrup, which they greedily devoured. I suspected, however, that in consequence of this disaster the hive might ultimately succumb. They continued to work when the days were fine, but they made little or no increase to their numbers. When I examined them about a week ago their numbers appeared to be reduced to four hundred or five hundred. The other Ligurian hive is making progress, but is still weak, having, perhaps, about two thousand bees.

I have now to relate a rather unusual incident in connection with the first Ligurian hive mentioned above, and a Ligurian stock (not pure), given to me last year. The queen of this latter hive breeds Ligurian bees of the most beautiful colour and form, and also bees grayer in colour than the common black bees. The stock, though having literally no stores left in spring, bred rapidly, and drones made their appearance about the middle of May. The bees of this stock were so voracious that they would sip up any quantity of syrup. The stock became very full of bees, and though there was no expectation of a swarm, owing to the inclemency of the weather, and they were so much under my eye that it was next to impossible they could have swarmed without being observed, yet on Tuesday week (June 26th), I was astonished to find a dead queen lying at the entrance of this hive with a few bees around it. I was unable to decide whether old or young. I sat down on a seat beside the hive, and in a short time I heard the usual piping that precedes the second swarm. I then put my ear close to the hive and heard distinctly the two voices or sounds that are usually heard—the tenor and bass. On Wednesday the hive swarmed, and, to my astonishment, the swarm was no larger than an ordinary second or cast. I turned up the stock and found it "choke full" of bees. When the swarm had clustered on the branch of the tree I noticed that some other bees were joining it. In the course of a few minutes I found that fighting had commenced, as a considerable number of pairs of bees in deadly conflict were falling on the ground and perishing. I had the swarm bived in a skep full of comb. On inverting it I found a queen encased. I immediately took a spoon, and by means of it conveyed the cluster into a small vessel, and having sprinkled the bees with water I found a fine queen in the heart of it. She was immediately set at liberty, and was apparently uninjured. I put her into a zinc cage, placing the cage in a stock whose queen had recently died, and which was rearing young queens, intending next morning to abstract the black young queen and to substitute the Ligurian. To my disappointment, however, next day I found her dead in the cage.

On examining the weakest of the Ligurian hives to which I have referred above, I found to my surprise the bees had all left, queen and all. They had evidently deserted their hive (as a hunger swarm), and joined the second swarm that came off from the stock hive. It was no doubt their queen I found encased, and which died, as I have described. I had to-day (4th July), another case of an old queen deserting with about three hundred bees (all the bees in the hive), and alighting on the top of another stock.—J. L.

FOUL BROOD OR CHILLED BROOD?

I beg to submit a suggestion as to the cause of foul brood, or, at any rate, one of the causes, and to preface a statement of the circumstances on which my opinion has been founded.

I commenced bee-keeping operations this spring with eleven stocks, of which ten were very strong, as may be surmised when I say that in spite of every effort to prevent swarming I have succeeded in only three cases, the remaining seven stocks having sent out eleven swarms, of which four issued from an equal number of black bee-hives, while seven have to be credited to three Ligurian hives. The single exception to the general prosperity was a Ligurian stock, which never appeared last year to recover the sending out of a second swarm on the 11th of June, which equalled any first swarm I ever saw, so far as numbers were concerned, and all through the winter the weakness of the hive in question was the subject of frequent observation. I should have suspected, indeed, the loss of the queen, but that the bees carried in pollen, and on the 16th of June I removed the crown-board and lifted out all the ten Woodbury frames, carefully inspecting them one by one. The combs I found well stored with honey and brood; but the bees had evidently been driven by the unusual severity of the weather to cluster together about the centre of the hive, so that the outside combs were bare, and these, from the decaying

larvæ and nymphs in their cells, quickly proclaimed to one's organs, both of sight and smell, that foul brood had attacked the hive.

My first impression was to destroy the stock as soon as evening should have brought the dwindled family together; but observing that four of the frames were well covered with bees and with plenty of brood in all stages, and quite fragrant, I restored these latter, burying all the rest. The result of this change in the interior economy of the hive was quickly perceptible in the increased activity of its inmates, and on the 7th of July I again took off the crown-board and examined the four frames, finding them in most excellent condition in every respect.

On the 14th of July I again commenced the inspecting process; but the moment I exposed the interior of the hive to view the bees rushed out and assailed me so vigorously that I was satisfied all was going on well, and lest any diminution of numbers should result from loss of stings, I restored the crown-board to its place again.

The inference I draw from the above facts is that foul brood is in some cases caused by an insufficiency of bees to keep up in the hive the amount of warmth required to mature the rising generation, especially when very hot weather encourages egg-laying in all parts of the hive, only to be followed by cold of an unusual degree. The comb being then deserted by the bees, the grub dies and putrefies, becoming feculent, and soaking more or less into the wax surrounding. Instead of increasing the strength and activity of the colony, the decomposing brood becomes a double source of weakness—negative by the non-increase, and positive by the bad effect upon the bees, whose strong dislike of noxious odours of any kind must be well known to every apiarian.

In two other instances lately at a friend's apiary, foul brood may be traced to precisely similar causes, in these, unhappily, involving the total loss of the stocks.—C. H. HOBGSON.

[This appears to be a case, not of foul brood but chilled brood. Virulent foul brood is highly infectious, and cannot be cured by excision. Its cure by any process is, in fact, so troublesome in practice and so uncertain in its results, whilst the risk of spreading the disease is so great, that it is far better to treat it like the cattle plague and "stamp it out" without delay as soon as its existence is ascertained.]

BEES IN A DECAYED STRAW HIVE.

I HAVE an old straw hive full of honey and bees. It is falling to pieces. It has a second hive on the top of it, put on last year to protect it for the winter. This makes matters worse, as it also is filled with honey and bees, and the bees are, besides, clustered all over the hive outside. I cannot leave them in this state for the winter. What would you advise me to do?—S. D. K.

[The bees will all betake themselves inside the hive as soon as the nights become chilly. We should then drive, and unite them to another stock in the manner described in page 59 of the last edition of "Bee-keeping for the Many." Do not use chloroform.]

OUR LETTER BOX.

BURY POULTRY SHOW.—Mr. J. F. Bott, Cardfields, Hatfield Peveril, near Chelmsford, informs us that he received high commendations in class I for Coloured Dorkings, and class 18.

SPANISH FOWLS TOO FAT (D. H.).—As the food of your fowls is lying on the floor, they are overfed. They should not be fed in the house, and food should be given only so long as they will run after it. They are feverish, or they would not lose their feathers. Reduce their allowance of corn, and give lettuce, growing grass, and peat earth. Laying fowls are always subject to sudden death when they are too fat.

HOUDAN COCK LAME (M. A. F.).—We have not found Houdans get humble-footed like Dorkings, nor do we think they will be so. We believe that on examination you will find some injury. Try whether pressure gives pain. We prefer dark cocks to breed from, and think the chickens should be darker than adults. It is one of the breeds in which there is a tendency to become lighter as the birds grow older.

REARING GUINEA FOWLS (E. C. H.).—Guinea chicks want to be fed like young Pheasants on curd, dough, boiled eggs chopped fine, and bread and milk. The hen should be kept in confinement. Nothing is so prejudicial to chickens of all kinds as to be kept in a room. It is productive of cramp, it is bad for the feet, and yields no food.

EXTENSIVE POULTRY-BREEDING (Positive).—Poultry-breeding on a large scale has never yet been found profitable. It has not succeeded at Bromley. It will pay as an adjunct to an agricultural establishment, but it cannot stand alone.

SWOLLEN TOES IN FOWLS (A. W. S.).—We have never seen the disease you mention, except in La Flèche cocks. It is common to all birds in frosty weather, but then the naila come off, and the toe heals, remaining only a little swollen. If you have either stone, wood, or asphaltum pavement in your house, it may have to do with it.

INDUCING HENS TO LAY IN WINTER (H.).—Animal and other stimulating food will make fowls lay in the winter. The same may be accomplished by getting fowls of the proper age without resorting to undue or improper feeding. We are certain that the purchase of some thousands would be a losing investment. You can only ascertain whether eggs are clear or fecundated after they have been under a hen for five or six days.

POULTRY IN A SMALL ENCLOSURE (A. Cottager).—You can keep a score of hens and rear chickens from them on 500 square yards. If it is not all grass, you will have to supply them with helps. They must always have plenty of green food and dust. A broody hen may be made to sit in a strange place, by being put on her eggs at night in the dark, and shut down so closely that she cannot leave them. After a day or two she will keep to them.

FOOD FOR YOUNG PHEASANTS (Constant Subscriber).—Buy Daily's book on "Pheasants and Pheasantries." You should not give ant's eggs till they are wanted, by doing so you have deprived yourself of a resource in your time of need. Feed on curd, dough, bread and milk, and boiled eggs. Keep them dry, and keep the hen shut up.

"W. S., Shrewsbury." We have a letter for you if you will send us your full address.

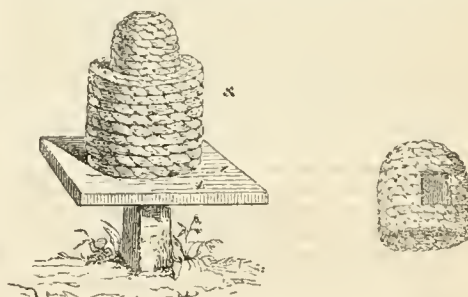
GROUND OATS FOR POULTRY (M. A. F. and G. P.).—We know of no place where these can be obtained except at Mr. Agate's, Slaughman Mills, near Crawley, Sussex.

YOUNG TURKEYS WITH SWOLLEN HEADS (Young Beginner).—Give your Turkeys directly some bread steeped in the strongest ale you have. Put a strong solution of camphor in all the water they have to drink. Wash their eyes with cold water and vinegar. Keep the hen constantly shut up under a rip; it must be one that will allow the poult to run in and out. Feed generously on oatmeal mixed with milk, and with green onion tops chopped fine, and mixed with it. Put the hen in a dry sunny place, and spare neither ale nor camphor. If you neglect the disease, all your poult will die.

SALE OF EGGS (E. H. E.).—The best purchasers are the vendors of eggs in your neighbourhood. Fresh-laid eggs are always more sought after than those imported, and readily command a higher price.

REMOVING BEES TO A DISTANCE (A. S.).—We should certainly defer the removal until the autumn. The season is now too far advanced to render it probable that the bees will again take to the super, and in this case we do not see how you can obtain any profit from them this year without deteriorating the stock.

PAYNE'S HIVE (Inquirer).—The best answer we can give is the following extract from "Bee-keeping for the Many," which you can have free by post from our office, if you enclose five postage stamps with your address:—"Procure a supply of Payne's Improved Cottage Hives; also, of small hives, 8 inches in diameter and 7 inches deep, flat at the top,



with a bit of glass in one side covered by a shutter. This hive is in shape the same as the large one, and with a hole in the top, covered with a piece of straw-work in the same manner."

SILKWORKS (F. H. F.).—The best works on their management are Italian. We published a translation of one by M. Ricci, in the Tenth Volume of our first series.

GISHURST COMPOUND (M.).—If your pet dog ate any of the Gishurst compound it may have killed him. We do not know the composition of the compound; but as it kills insects, in larger quantity it may be fatal to a dog.

RASPBERRY VINEGAR (E. S.).—One quart of Raspberries to be put into a quart of the best vinegar; let them remain a week, stirring occasionally; then add 1 lb. of loaf sugar, boil very gently for twenty minutes, strain, and when cold bottle it.

BREWING (Brever).—We know of no reason why wrought-iron boilers should not be used, though copper boilers are employed. We do not know what information you seek by asking, "Who is the best brewer?"

POULTRY MARKET.—JULY 24.

SULTAN, Viceroy, and Belgians are all gone. Trade feels it, and senders may now expect very different returns.

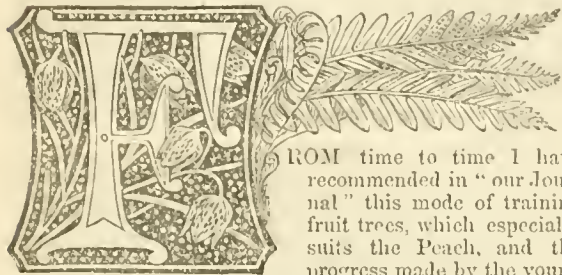
	s.	d.		s.	d.
Large Fowls.....	3	0 to 3	6	Pheasants.....	0 0 to 0 0
Smaller do.....	2	6	3	Partridgea.....	0 0 0 0
Chickena.....	1	3	1	Grouse.....	0 0 0 0
Goslings.....	6	0	6	Guinea Fowls.....	0 0 0 0
Ducklings.....	1	9	2	Rabbits.....	1 5 1 6
Pigeons.....	0	8	0	Wild do.....	0 8 0 9

WEEKLY CALENDAR.

Day of Month.	Day of Week.	AUGUST 1—7, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.		Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.		m.	s.	
1	Th	Lammas.	75.8	50.3	63.0	18	25	4	47	47	5	16	18	48	1	6	5	213
2	F		75.8	51.1	63.4	19	25	4	45	7	22	7	49	8	2	6	1	214
3	S	Royal Horticultural Society, Promenade.	74.8	50.6	62.7	20	28	4	44	7	36	8	18	9	3	5	57	215
4	SUN	7 SUNDAY AFTER TRINITY.	75.8	50.8	63.3	17	29	4	43	7	48	9	45	9	4	5	52	216
5	M		74.3	51.3	62.8	18	31	4	41	7	58	10	11	19	5	5	47	217
6	Tu	Royal Horticultural Society, Fruit, Floral,	73.4	50.6	62.0	19	32	4	39	7	after.	38	10		6	5	41	218
7	W	[and General Meetings.]	74.7	50.9	62.8	14	34	4	37	7	10	1	8	11	7	5	34	219

From observations taken near London during the last forty years, the average day temperature of the week is 74.9; and its night temperature 50.8°. The greatest heat was 92°, on the 2nd, 1856; and the lowest cold 31°, on the 2nd, 1864. The greatest fall of rain was 1.23 inch.

SPIRAL CORDONS.



FROM time to time I have recommended in "our Journal" this mode of training fruit trees, which especially suits the Peach, and the progress made by the young

spiral cordons in my new house would at once convince any sceptical visitor of its advantages. These young trees, planted in groups of five, at intervals of 15 inches, have already made immense strides towards the glass, and are regularly clothed with good bearing shoots from base to point, the buds prominent, the wood firm, and the foliage clean and healthy, promising a heavy crop next season. I removed all the fruit from them to favour development, being convinced that, in most cases, trees are ruined by early bearing, whether in orchard-houses or in the open ground. Cases may, however, occur where excessive growth requires checking by every means in our power; and, indeed, some of the standards in the new house are becoming troublesome, and difficult to keep in balance.

There is no doubt in my mind, however, now that spiral cordons for the borders, intermingled with pyramids in pots, kept rather low so that the sun may freely shine on the lower portions of the wall trees (in lean-to's), will be the future style of border-planting for orchard-houses.

For the walls of lean-to's nothing equals diagonal cordons in productiveness, simplicity, and beauty.

In the case of span-roofed orchard-houses, parallel rows of diagonal cordons, planted in borders, and trained on horizontal wires kept tight, with guiding rods of osier to keep the leaders straight, are very beautiful, and most fertile. Rows of potted trees, kept low, are placed near the sides of such a house; the rest are all diagonal cordons on either side of the walks.

I wish readers of this Journal could see the house of a friend near London, who generally styles himself "your persevering disciple" when writing to me, and well merits the title; and, in truth, orchard-houses were made for such men. They are a never-failing source of pleasure and interest to them. This gentleman, who is a man of business, rises regularly at 5 A.M., and prunes till breakfast-time. Then to London, and after dinner, on his return, till nightfall his chief occupation and only recreation is pruning, and superintending the watering of his beloved trees. Of these there may be nearly a thousand by this time, all beautifully pruned and trained. The houses are span-roofed, 700 or 800 feet long, and planted with diagonal cordons, except near the sides. My friend wished to make the trees meet in an arch overhead, but this plan, though picturesque, I declined to recommend. I should have pre-

ferred spiral cordons for the second rows of trees, the two central rows remaining diagonals of immense length and power. With potted trees near the sides such an arrangement seems to me not very easy to beat. As to appearance when in bloom, it must be splendid.

My own predilections are all for lean-to houses, heated or unheated; nevertheless, by a combination of this form with the span-roofed, every object would be obtained. By dividing the houses by means of glass partitions, and by the application of various degrees of heat, a succession of fruit would be secured.

But whatever be the form of the house, spiral and diagonal cordons are what I prefer, with potted trees for the sides of the houses, or to mix with the others. Large standard trees are beautiful, but not so easy to restrain, nor so productive; moreover, they are a return to former, now exploded, notions. More trees, smaller in form, and closely stopped, represent the more modern ideas—in orchard-house trees at least. Each of my groups of spiral cordons, of five trees together, takes up about the same space as a large standard, and will, probably, bear three times as much fruit; of varieties, too, ripening from July to October, instead of all at once. As to pruning, these groups can be managed by a child, so to speak.

At Billancourt there were exhibited some small specimens of Apple trees in pots, trained spirally, which had a good appearance; they were intended for a novel portable orchard-house, the invention of some French gardener at Montpellier. These orchard-houses were a step in the right direction made by our neighbours; they afforded a hint which might be useful for such persons as could not find space for larger houses. For choice Cherry trees in pots, easily sheltered, or for select American Apple trees, they seemed well adapted. In these cases the spiral form had been chosen, with a just appreciation, by our foreign friends. If ever they seriously adopt orchard-houses, there is no doubt that cordons such as here spoken of will be those chiefly used.

As it is, cordon training is making such rapid advances in popularity that it is no longer necessary to advocate it in these pages. Only, as spiral cordons were first tried in our houses (they are not adapted for open-air work), they have many claims, besides their evident utility, to be again brought before the notice of the readers of this Journal. To my clerical brethren, especially, always in advance in horticultural novelties—and they will not mind my saying it, I know—sometimes in advance (?) of my good friend Rivers in "departing from his teaching with advantage," let me here recommend these beautiful cordons.

Another reason for so doing is to be found in the opposition any novelty always meets at the hands of prejudiced men. Whilst in Paris a learned professor, who had written certain heavy works on kindred subjects, but refuses to recognise any opinion but his own, said to me, "Oh! you, too, have gone into the corkscrew line (*donné dans le tire-bouchon*), together with Du Breuil and Gressent." Charmed to be condemned in such excellent company, no reply was needed; but when the *savant* proceeded to assert that English gardeners could grow no Grape at all equal to the

venerable Chasselas de Fontainebleau either in beauty or flavour, it was abundantly evident that his was one of those special organisations in which opposition to progress is a rule and a principle. But this gentleman does not stand alone; there are many who have no sympathy with the experiences of others, and refuse to recognise any truth except what falls within their limited vision. It will take years before either orchard-houses or ground vinerias will become popular abroad, though well suited to many districts. In England, however, we have many evidences of their popularity, and of the increasing knowledge of those who work them.—T. BRÉHAUT.

APRICOT CULTURE.

THE Apricot succeeds in all soils where the wild Plum (*Prunus insititia*) flourishes, and the conclusion may be safely acted upon, that where the Plum succeeds there the Apricot will also do so. It may also be accepted as an axiom, that in soils where the Rhododendron is at home, the Apricot is a pining stranger; and this does not apply to peat soils alone, in which the Rhododendron spreads itself from self-sown seeds, but to those strong clays where the Rhododendron is nearly if not quite as much at home. The Apricot likes a good friable loam, and such the soil may be from fine particles of sand, coarser gravel, or pieces of chalk entering into its composition, and it appears to me that it does not matter which. Strong clay soils the tree does not thrive in, except those containing a large proportion of marl, nor will it succeed in strong loams so well as in those that are sandy and friable.

The first requisite in the culture of the Apricot, as of all fruits in our climate, is good drainage. The ground, therefore, ought to be so drained that no water shall remain stagnant within 3 feet of the surface, and this ought to be most carefully attended to on what are known as deep loams, for in these the roots soon penetrate deeply. In moist seasons the trees grow rapidly, and from the great amount of evaporation taking place by the foliage, the soil becomes dry, and the roots are thus rendered altogether useless; the trees make a quantity of wood, and canker results. Shallow soils are far superior to those which are deep for Apricots, and, indeed, for all fruit trees, for they are drier in winter, and warmer; the trees are not so liable to run to wood, and their roots may not only be fed, but kept moist and near the surface by top-dressings of rich compost. In soils of a rather sandy, friable nature it will be sufficient to drain the border to a depth of 4 feet, and not less than 3 feet, and to trench it to the latter depth, mixing along with it the trenching a quantity of fresh turf (the fuller of fibre the better), at the rate of a cartload to every ten square yards of surface, and where the soil is adhesive a like quantity of chalk broken small, gravel, or sharp sand, will be of service in checking luxuriance, and promoting a sturdy growth. In trenching, if the lower part is adhesive it should be turned to the top, where, by the action of frost and air, and mixing with friable compost, it may be rendered open.

Where the soil is a strong clay, and the subsoil is wet, it is well to make a new border. In that case all the soil should be dug out, taking away all that is of a stiff, stubborn nature, but retaining the more friable portion for mixing with the fresh compost. The soil ought to be taken out to a depth of 3 feet, and the bottom should incline from the wall at the back to the front. At 3 feet from the front, and at 1 foot 6 inches from the wall, there should be drains along the border, and 1 foot deeper than the bottom. No soil is to be placed over the drain tiles, but they and the bottom of the border should be covered with brickbats or stones, as in making the foundation for a walk. If the subsoil is strong and wet, it would be well to concrete the bottom, in which case the excavation should be made 6 inches deeper, and that depth of lime riddings or lime in the proportion of one part, and two parts gravel, should be put on soft, and when the mixture hardens it must be beaten firm. Upon this a drainage of brickbats, broken stones, &c., should be placed to the depth of from 6 to 9 inches. The border may then be filled 6 inches above its intended height, to allow for settling, using for the purpose the top spit of a pasture where the soil is of a good loamy character, and sandy rather than clayey. Bear in mind that the less soil and the more turf taken the better the border will be, and to keep it open add a load of chalk in pieces from the size of a hen's egg down to that of a hazel nut to every six of soil, in case of the latter being deficient in calcareous matter, also the same quantity of sharp sand, varying these ingredients according to the friability

or adhesiveness of the loam. The border should be equal in width to the height of the wall against which the trees are planted. As a rule, the border may be 12 feet wide, and the surface of the border ought to have a slope from the wall to the front of not less than 1 foot, nor more than 2 feet.

In sheltered spots in the south, the Apricot succeeds as a standard, but the kinds are the Breda, and the Common or Roman. The fruit, however, is in general small for the kind, and the crop exceptional rather than certain. Mr. Rivers states it may be calculated upon twice in seven years. Mr. Thompson, in his "Gardener's Assistant," page 536, writes, "In the south of England, some kinds of Apricots, such as the Breda, and the Roman or Common, bear well as standards, if the springs are favourable, and although the fruit of such is not so large as from trees on walls, yet it is more juicy, and of richer flavour." I allude to this as conclusive of the uncertainty of the bearing of standard Apricot trees in the open air, and as proving that walls, as retainers of heat, are destructive of juiciness and flavour. Might I ask in what way an orchard-house, whose merits are the protection of the blossoms from frost, the throwing off heavy rains, and the retention of heat to the trees, can give more juiciness and flavour than exist in fruit against a wall, when the retention of heat by the last destroys these qualities? As to the culture of Apricots as out-door standards, they have proved with me only productive of blossoms, and fruit which never ripens.

Against an east or west wall the Apricot may succeed in the south, and no doubt does in the warmer parts; but in the east and west of England it requires south-east or south-west aspects, and in exposed situations, and for the whole of the north country, a south aspect is needed for ripening the fruit well. In some elevated and exposed localities the crop is not a certain one, even upon a wall with a south aspect; hence we find the trees trained against flued or hot walls in some parts, but such are now becoming obsolete, either from their intility, or the cheapness of glass, neither of which circumstances, however, is any excuse for the trees not producing good crops. I have grown Apricot trees on such walls successfully not one year but many; but I admit Apricots can be grown quite as well under glass.

The best time to plant Apricot trees is the first moist weather succeeding Michaelmas-day; for, by planting early, young roots are secured wherewith to make a good start in the following year. Take up the tree carefully and remove it with as much earth adhering to the roots as practicable. It is better to pay a little more for this being done at the nursery, and if neatly packed and the foliage covered with matting, the trees may be safely transmitted by rail to any part of the island.

In planting, the trees should be placed on the border, their roots spread out at full length over the surface, and if they can be covered with 6 inches of soil, and the stem be as deep in the ground as it was before, that is the best way to plant Apricots; but if a greater depth of soil than 6 inches is required to cover the stem to its former depth, take out soil, but not an inch more than is absolutely necessary to plant the tree as deeply as before, and yet on an elevation 6 inches higher than the rest of the surface. In the case of heavy, wet soils, it is well to extend the roots on the surface, and to place soil over them, which will be equivalent to planting the trees on a cone. The roots should not be covered more than 6 inches, nor less than 3 inches deep. The soil used for planting may be three or four barrowloads of rather light loam, the turf from a pasture cut 3 or 4 inches thick, and chopped up rather finely.

After planting give a good watering, and sprinkle the foliage with water through a rosed watering-pot. If the sky is clear a mat should be placed over the trees for a day or two, and the foliage sprinkled with water morning and evening for a week. The leaves will soon fall, and the roots by that time will have taken hold of the soil. The ground about the trees should now be mulched with 3 inches of rather long stable or farmyard manure, and then the trees are safe for the winter.

There may be cases in which the trees cannot be planted so early as the end of September, but planting should be performed as soon afterwards as possible, and not later than the middle of November if the trees are expected to make a good start in the following year, for after this time fresh roots cannot well be formed. Planting may be done any time between September and March, but planting later than the middle of November, though commonly practised, is unnatural, and less successful.

I may here state for the information of those having unfruitful, though not very old Apricot trees, that the best time in the year to lift them is the middle of September, and for three

weeks afterwards. The trees should be taken up very carefully, unnailling the branches, of course, and when out of the hole fill it up, and plant them on the surface, spreading out the roots, and covering these not deeper than 3 inches with chopped turf, placing also a thin layer under them. A good watering, and frequent sprinklings of the foliage, will encourage speedy rooting. Lifting is best performed during showery weather. The surface should be mulched with 3 inches of littersy manure when the leaves fall. I find trees moved in September, and up to the second week in October, are now covered with fruit like strings of Onions; but those moved in November have dropped most of the fruit that set, and their growth is meagre, whilst the others, notwithstanding the fruit, have made plenty of wood.

The Apricot does not succeed against a low wall, as it is impatient of the close cutting of the branches, and this must be done upon a low wall, unless root-pruning is extensively practised, and the roots are restricted. Apricots should have a wall 12 feet high, or one not less than 9 or 10 feet in height, but the higher the better. Against a 9-foot wall 27 feet is not too great a distance to plant the trees apart; on a 10-foot wall 25 feet may be allowed; on one of 11 feet, 23 feet; 12 feet, 21 feet; and 2 feet closer for every additional foot in the height of the wall. Against walls more than 10 feet in height, a standard should be planted midway between the dwarfs.

The principal varieties are—

Large Early.—Good, and the best of all the early varieties.

Kaisha.—A good bearer, richly flavoured, and earlier than the Moorpark.

Hemskerck.—Good in every respect; one of the very best.

Royal.—Not equal to the Moorpark, but the tree is not so liable to lose its branches by dying off.

Moorpark.—Well known, tree very subject to die off by limbs.

Musch-Musch.—Very productive in light and chalky soils, but on heavy, wet soils a bad bearer, and tender. Fruit small, of a fine rich flavour.

Shipley's.—A great bearer, but of no use except for preserving.

Breda.—Small, and moderately rich-flavoured. The tree requires plenty of room, and is a shy bearer whilst young.

Orange.—Its earliness and productiveness are its only recommendations.

Turkey.—A fine sort for preserving.

The first five are the best for dessert, and to them may be added the Orange, on account of its earliness.

The Roman is the only kind succeeding well as a standard, but has no other merit.—G. ABBEY.

JUDGING GRAPES.

In common with Mr. W. Thomson, I think it very desirable that the Fruit Committee of the Royal Horticultural Society should turn their attention to this subject, with a view to "draw up and publish a set of rules for judging Grapes." I think this may be satisfactorily done if every one of experience will join in the endeavour, by contributing simple and faithful accounts of any striking instances bearing on this particular point that have come under personal observation.

Mr. Thomson does not say in his article (page 37), whether or not he would consider the colour of Grapes a true criterion to judge the flavour by, or whether he considers it requisite on all occasions to taste them, which I conclude he does. I take for granted that he merely mentions the instance of finding the brown Grapes the finest in flavour and the jet black ones sour, to show the great mistake of judging of the flavour in proportion to the different degrees of blackness, and not that he would set up the brown as the standard colour to be relied upon as a true indication of the greatest excellency in flavour, and jet black as a true indication of sourness. It is very desirable that Mr. Thomson should state definitely his ideas on this point.

In the meantime I may mention a circumstance bearing upon this subject that occurred at the fruit table at the National Exhibition at Manchester, referred to by Mr. Thomson, concerning those very same two lots of Grapes—viz., Mr. Meredith's and my own.

I had noticed at the time of removing the fruit that there had been three or four berries taken from my bunches, and also from those of Mr. Meredith, but took no further notice of the circumstance; but at a recent horticultural exhibition in this county I met and entered into conversation with an eminent gardener who had been officiating as judge. He told me that during a very warm controversy respecting the respective merits of the two exhibitions in question, it was decided upon, for the satisfaction of a reporter to a Nottingham paper (if I recollect aright), to taste them. I should like either the gentleman in question or some other eye-witness to state

what were the results; but as none of them may be inclined to come forward, I may mention that I was informed that it was decided that the blackest Grapes were found to be superior in flavour as compared with the others; so that this particular instance referred to by Mr. Thomson would tend rather in favour of the black than the brown hue. I mention this circumstance just to induce amateurs to pause before they jump at any conclusion on this subject.

If we are to understand Mr. Thomson merely to mean that he does not consider the colour of the Grape a true criterion by which to judge of the flavour, then I agree with almost everything he says, though my experience differs from his; because by far the finest-flavoured Grapes that I ever tasted had a very much finer colour and bloom than any other Grapes I ever saw. Other competent judges said the same.

As a rule, Grapes ripened by full exposure to the sun's rays are deficient in blackness, especially if acted upon by a sudden flash of bright, hot, sunny weather when about half coloured, or snatched up quickly, as it is termed; yet it is full exposure to the sun's rays, with a free circulation of air, that is indispensable to ensuring sweetness and flavour. The Grapes to which I referred as possessing the finest flavour combined with the greatest perfection as regards colour and bloom, were ripened by full exposure to solar influences in the house in which they grew. They were shaded by rather more foliage at one end, besides being shaded by a large Sycamore tree outside. The Grapes at that end of the house were quite equal in point of colour, but not in bloom and flavour.

Other instances besides this have come under my observation, impressing me with the necessity of attaching more importance to the bloom than Mr. Thomson expresses himself to do. I propose that bloom shall have the same number of points as colour and size of berry; but I consider bloom of more importance than either colour or size of berry. A bunch of jet black Grapes without bloom is nothing to compare in appearance with Grapes covered with a thick coat of bloom.

I also consider bloom a greater indication of flavour than colour. I would give it two marks if not three, for bloom is the same to the eye as flavour is to the palate.

Grapes combining flavour, blackness, and bloom possess a vinous flavour which I never found to exist when the colour was any shade of red or brown, but I do not think such Grapes ever surpassed some brown ones I have tasted for mere sweetness.

As regards the size of the berries, I have found that when they go above a certain size they are generally deficient in colour; and in cases where odd, very large berries occur in the same bunch with ordinary-sized ones, they will be deficient in colour but not in flavour. Nevertheless, the largest berries I ever saw were quite black; they were exhibited at the 1866 May exhibition of the Liverpool Botanic Society, and carried off first, second, and third prizes, although Mr. Meredith and the Earl of Derby competed in the same class. I saw nothing to compare with them for size of berry, and nothing to surpass them for colour, even at the International Exhibition at London in the same month. They were exhibited by Mr. Pilkington, of Eccleston Hall, near Prescott.

The next largest in size of berry I ever saw, yet perfect in colour and bloom, were at Mr. Meredith's, in the vinery at the east side of his residence. These in size of berry, size of bunch, blackness, and bloom combined, surpassed anything I ever saw before or since.

One more instance which I may mention as showing flavour, blackness, and size of berry combined I know Mr. Thomson is acquainted with—namely, a large old Vine in the large middle vinery at Wrotham Park, Herts. This Vine had stood in the same position ever since the house was first planted, I believe; but all the other Vines were new. Mr. Thomson gives a full account of removing all the old ones and renewing the border and Vines in this house, in his excellent work on the cultivation of the Vine—a work which no one ought to be without. This old Vine, during the two years that I had charge of it, bore larger berries, jet black, and of finer flavour, than any other Vine in the house.

These four instances are quite faithful, and tend to convince me that, after all, the very best Grapes are those largest in berry, finest in bloom, and blackest. As I said before, they possess a vinous flavour of which the brown ones are destitute, yet it is quite true that a cool shady atmosphere is more conducive to the blackening of Grapes than exposure to the sun; still Grapes that are quite black, yet fully exposed to the sun and air, must be the very best Grapes. Yet I do not think this can be accomplished more than three or four years together

without renewing the border, as it is while the Vines are in their prime, in a border made of good turf without any manure, that their produce may be brought to this perfection. I have always found Grapes inferior in colour when it was requisite to apply manure water or guano; but where the natural soil is suitable for the Vine, and the roots are not confined to the prepared border, I have known them produce Grapes of the finest quality for many years.

This being a very important subject, I hope some of our best men will take it up with a sincere desire to set up a correct standard. For my part I cannot see how Mr. Thomson's can be improved upon, except by giving more points to bloom.—T. DIXON, *Waterdale, Sutton St. Helen's*.

Mr. Thomson has done good service in again arousing attention to the vexed question of judging Grapes.

I never yet could reconcile myself to the idea that it was of more consequence to gratify the eye than the palate. I have invariably found that Hamburg Grapes of a fine flame colour, are higher flavoured and thinner-skinned than those of that dense black colour so insisted on by many judges.

The assertion that flavour and colour go together is what I cannot subscribe to. Mr. Thomson's ten points of excellence, I think, cannot be improved, and if the Fruit Committee of the Royal Horticultural Society can draw up a set of rules that will be followed, and generally acknowledged, it will save judges much unpleasantness.—THOMAS SPURTT, *Hockfield Place*.

I, AND, no doubt, many others, agree with Mr. Thomson as to the necessity for a recognised standard for Grape-judging; but I venture to think that his standard is not a correct one. I so think, because, with very rare exceptions, good colour and flavour are united in the Hamburg.

2nd, Because in most shows, excepting a few of the very largest, all Black Grapes form one class: consequently, were flavour the main test, how often should we see the small Frontignan exclude the Hamburg, and, perhaps, a poor-looking dish of the latter beat a well-finished dish of the same variety.

3rd, Because people's taste differ so much.

4th, Many employers would not allow their gardeners to exhibit, if the best bunches in the house were to be mutilated by the judges.

I think the following a good standard—Colour, two points; size of berry, two points; size of bunch, one point; symmetry of bunch, one point. Total, six points.

By the above, colour and size of berry would be two-thirds, which I think they deserve. I hope the readers of "our Journal" will give their opinions freely, so as to settle the question soon.—JOHN ALLISTON.

LACHENALIA QUADRICOLOR, AND HOW TO GROW IT.

I HAVE often been surprised by not seeing this beautiful flower more cultivated than it is. Coming into bloom in February, continuing in beauty for eight or ten weeks with proper care in watering, and having such beautiful scarlet and yellow bell-shaped flowers, it is one of our brightest and most useful of garden decorations. More than that, it has a very pretty effect, either for the dinner-table or conservatory.

My plan of growing it is to pot the bulbs in July, or the beginning of August, in some rather heavy loam, or decayed turf, about three-quarters, and one-quarter well decayed leaf mould and sand.

I plant about a dozen bulbs in a six-inch pot, cover the bulbs over to the depth of about three-quarters of an inch with soil, and place the pots out of doors on some ashes, or in any place where the worms will not find their way into them. There they are left until there are signs of frost, and then I take them to a cold frame, or place them on the shelves in a north house, or in any other where there is not much fire heat. Only just enough water should be given in the winter months to keep the leaves from flagging.

About the end of January a pot or two may be taken to a warmer house, if the plants are wanted for table decoration; they will stand gentle forcing. When the pots are full of roots supply water, and as long as the leaves are green after flowering, but no longer. Then the pots may be laid on their sides in any cool, dry place.

Under this treatment I have never failed to have healthy,

short, stout leaves, standing erect, and spikes of bloom not requiring any support.

I should like to see prizes offered at some of the Royal Horticultural Society's Exhibitions for a collection of bulbs in flower. I think they are too little cultivated, and out of a hundred persons who saw this *Lachenalia* in bloom here, not one had seen it before.—T. ELCOMBE, *Ring Gardens*.

POLEMONIUM CÆRULEUM VARIEGATUM.

MANY of your readers may have seen this charming Polemonium in a mixed border of choice herbaceous plants, and I will venture to affirm that ninety-nine out of every hundred would exclaim, "How beautiful!" It is, however, much more beautiful in a cool, moderately shaded conservatory or fernery, where its gracefully arching Fern-like foliage is extremely inviting and refreshing; the beautiful silvery variegation offering a most pleasing contrast to the various shades of green which are exhibited by the fronds of the Ferns, or to the coloured leaves of such plants as *Coleus*, *Perilla*, *Iresine*, and *Tricolored Pelargoniums*. Its culture being so simple, is another recommendation. It succeeds well, flourishing in light friable loam and leaf mould, with a very small quantity of silver sand.—B. J. W.

ESTIMATE OF SOME VARIETIES OF STRAWBERRY, AND THEIR CULTURE.

THE high position which the Strawberry holds, both as a preserving and a dessert fruit, renders it important to elicit information as to the qualities of the various kinds in cultivation, for the guidance of cultivators in determining on those calculated to give the best returns; and such information is especially valuable at this season, which is that for securing young plants.

In all cases it is desirable that the quality and nature of the soil be described; the acknowledged capriciousness of many varieties renders this necessary. A brief summary of the mode of culture adopted would add to the value of these notes. The communication of Mr. Douglas, in No. 329, is a move in the right direction.

I have this season fruited sixteen varieties, including most of those mentioned in Mr. Douglas's paper. I have carefully noted their merits, and my notes on these sorts are so nearly the same as his, that I will not occupy space by a detailed account of each variety, but will merely state that for weight of produce President bears the palm, that in flavour it is second only to British Queen and Crimson Queen, while in size, shape, and colour it leaves little to be desired. These qualities warrant me in placing it first on my list as a Strawberry for general usefulness, and one which I can unhesitatingly recommend as well worth growing. Indeed, I regard it as the best "light soil" Strawberry I have yet seen in cultivation.

Comte de Paris is my second best. A valuable kind in all qualities.

Of the varieties in Mr. Douglas's list which I do not grow, are *Empress Eugénie*, *Eclipse*, *Sir J. Paxton*, and *La Constante*. The last-named I have grown in previous years, and while I fully admit its brilliant qualities, I am bound to place a formidable set-off on the vital point of constitution. It wants stamina.

Of other kinds, *Wonderful* is certainly a wonderful cropper, but I cannot say another word in its favour. *Crimson Queen* is in all points equal to *British Queen*, with the addition of more colour, which it carries entirely through the flesh. *Filbert Pine* is a good cropper, and of good flavour, but not prepossessing in appearance. *Oscar* has fine fruit, but is a very shy bearer. Excellent is a first-rate strain of *Keens' Seedling*. *Newtown Seedling* is a heavy cropper, good in colour, and hangs after it is ripe longer than any variety with which I am acquainted. It is, however, only second-rate in flavour. *Eleanor* is large, and useful on account of its lateness in ripening, though deficient in flavour.

The soil here is a light vegetable mould, resting on limestone. Trenching 2 feet deep I hold to be a necessity, making the soil good from the top to the bottom. As I take up a portion of old plants every year, I bury them in the ground intended for the new plantation. I tread the ground rather firmly, and plant from 20 to 30 inches apart, according to the growth of the sorts used. Sometimes when I have plenty of plants and not much space, instead of setting one plant along every 2 feet of

the line, I plant three, so as to form a triangle. These become immense stools in the first spring after planting, and produce a crop equal to that of the second year. I never dig amongst the plants, but in the autumn give a heavy mulching of sound manure. In the spring I soak with liquid manure when time will allow me, and in the month of March I never fail to give a good top-dressing of common salt. This salting in light, dry soils I believe to be highly beneficial.

A great desideratum is a later kind than we have at present. Than the Strawberry no fruit is more useful; it is, therefore, important to extend its season, and while most other fruits have their late representatives, it remains comparatively stationary in this respect. Who will do honour to himself, and benefit the public, by producing a good, full-flavoured variety, naturally and decidedly late?—J. WILMOT, *Gardener to the Hon. A. Leslie Melville.*

TESTIMONIAL TO MR. BRUCE FINDLAY.

It is a common saying amongst Englishmen, "They manage things better in France," but it is very doubtful whether they manage their horticultural exhibitions so well in France as we do in England. So sensible are the horticulturists of Manchester of the great services rendered on a late occasion by Mr. Findlay for the advancement of horticulture, that they have set to work in good earnest for the purpose of giving him a substantial testimonial. This is as it should be. I am heartily glad to see that the patrons of horticulture in Manchester and its neighbourhood know how to appreciate the labours of their able Curator. It is not only the simple act of expressing their pleasure and gratification for the services rendered with so much care by Mr. Findlay, but I see in it the desire to give that encouragement to horticultural taste, which will no doubt be the means of very much improving the position of the Manchester Botanical Society. A sum of more than £100 has already been subscribed for the above purpose. I earnestly hope the testimonial may be made worthy of Mr. Findlay's acceptance.—J. WILLS.

UNFERTILE BLOSSOMS ON DWARF PEAR TREES.

By DR. J. S. Houghton.

ABOUT one year ago I called the attention of the readers of the "Monthly" to the unfertile character of the blossoms on certain Pear trees, which annually exhibit a great profusion of flowers, and yet produce but little, if any, fruit. I inquired what was the cause of the barrenness of the blossoms, and suggested that the botanical structure of the flowers ought to be examined by competent persons, in order to ascertain wherein they are defective. The particular variety of the Pear to which attention was called as unfruitful, even after being covered with blossoms, was the Duchesse d'Angoulême on the Quince stock.

I am happy to say that the proposed investigation into the botanical condition of the blossoms was made about the 1st of May last, by several skillful botanists on my grounds, and part of the report will now be presented to the public.

At the time of the examination there were several thousand Duchesse trees, eight, ten, and twelve years old, in full bloom, in close proximity to other varieties which are not so unfertile. The Duchesse trees were what gardeners call "one sheet of bloom." The opinion of all present seemed to be, that so much "bloom" must be very exhaustive.

Mr. Thomas P. James, botanist of the Pennsylvania Horticultural Society, examined the flowers very carefully with strong lenses, and said they were (as compared with flowers of other varieties) very weak in their organisation, although apparently perfectly hermaphrodite; that the stigmas were evidently feeble, the pollen limited in quantity, and the entire flowers in a low state of vitality.

The season was very unfavourable—cold and wet—but the flowers examined had not, at that time, been seriously injured.

A large quantity of the Duchesse blossoms were examined very minutely by Professor Horatio C. Wood, Lecturer on Botany in the University of Pennsylvania, under the microscope, and I have much pleasure in appending his very acute observations upon this deeply interesting subject. I trust that pomologists will not let the matter stop here, but that they will discuss the best method of avoiding an excess of weak

flowers on fruit trees—or, rather, the best means of producing a proper quantity of strong, well-organised, and well developed fruitful blossoms.

PROFESSOR WOOD'S REPORT.

I have examined the blossoms of the Duchesse d'Angoulême Pear. They are certainly sexually perfect, with both the male and female organs apparently normal to the naked eye; but with the microscope I find both the gynoecium and androecium (to use a medical phrase), suffering from general debility. Thus, the anther-cells externally appear to be well developed, large and finely formed, but they contain scarcely one-third as much pollen as similar organs of more fruitful varieties. It seems to me, further, that the pollen grains themselves are not so well developed, nor so crowded with granules or foveolæ. In the same way the female organs are defectively organised. For instance, the stigmas are not so large, and the little papillæ, which secrete the so-called stigmatic fluid, are not nearly so numerous nor pronounced as in the flowers of neighbouring trees.

In my own mind there is not much doubt but that these evident marks of the want of vigorous sexual development have a deeper meaning than appears at first glance. What if there are comparatively few pollen grains? Providence has so provided that the great mass of the pollen is superfluous, and ordinarily is wasted. Surely the mere absence of a part of this superfluity would not produce the barrenness you complain of. It seems to me highly probable that the appreciable want of strength is associated with a similar, but less apparent, degradation as regards quality; and there is a consequent want of power in the germinal matter both of the pollen and ovary, which is the real cause of the sterility. If this explanation be not the correct one, I know of no other.

Having thus made a diagnosis in the case, the next step is, if possible, to discover the cause of the condition, so as to remedy it, if practicable. Is it not probable that the source of the trouble is to be found in the excessive production of blossoms, which this variety of Pear is notoriously addicted to? Of all the various life functions of the plant, the process of seed-producing is, *par excellence*, the exhaustive one. It is well known how it often cripples, or even kills, a previously vigorous tree. Further, the period during the reproductive process, the worst for the plant, in which it eats up its life-capital fastest, is that in which the blossoms are perfected, the pollen shed, and the ovule impregnated.

The reasons for this are obviously twofold. In the first place, the production of very highly-vitalised matter rapidly exhausts both the plant and the animal. Now it is at the period alluded to that we have the greatest elaboration of costly products in the flower. Not only are the ovaries, with their contained ovules, and the anthers with their myriad pollen grains, rapidly developing, but the sepals and petals, with their numerous oil glands, are aiding in the prodigal waste of the strength the plant, mayhap, has been years in obtaining. It is readily seen that after impregnation, during the slow, gradual production of the fruit and seed, we have no such sudden burst of life activity.

Again, at this period there is, probably, the greatest loss of nitrogenised principles that occurs during the life of the plant. When the leaves are about to die their nitrogenised contents return to the stem and roots, showing the great value to the plant of these principles. The seeds, to be sure, contain much nitrogenised material; but then there are comparatively few of them perfected. Not so with the pollen. You can often see it almost making little clouds in the air, or dusting thickly the surface of ditches with its countless granules, and each of these is literally gorged with the most highly vitalised nitrogenous material the plant can produce. Surely, then, there is evident cause for the exhaustion of flowering, especially when we take into consideration the rapidity of the process as compared with the length of time through which the seed is perfecting. That the blossoming is very exhaustive, that in it are expended most rapidly the life-forces of the plant, we have numerous proofs. Thus the effects of profuse flowering on very young trees is well known.

Further, in the flower we have a rapid oxidation of carbon, or, in other words, a destruction of the bone and sinew of the plant; which is proven not merely by the evolution of carbonic acid gas, and the taking-in of oxygen by the blossoms, but by the heat given off from the flowers—an indisputable proof that there is a more or less rapid burning up of carbon in the flowers themselves, strengthened as it is by the interesting results of the experiments of Garreau, Vrolik, and De Vriese.

Thus, the latter *savans* found that the increase of temperature was much more marked when the plant-blossom was placed in oxygen than when it was in the air, and that all evolution of heat ceased when it was placed in nitrogen or carbonic acid—or in other words when it was deprived of oxygen; while M. Garreau showed that the well-known periodical increase and decrease of temperature in the blossom was accompanied by a similar increase and decrease in the amount of carbonic acid evolved.

The rapid absorption of cold water by the root from the soil, the constant evaporation from the foliage, the facility of radiation and conduction from the wide-spread open blossoms, with various co-acting circumstances, cause so rapid a loss of heat from ordinary flowers that the increase of temperature is only sensible to very delicate instruments, such as the thermoelectric pile; but when there is a mass of flowers on a dense spike or spadix, shut up as it were in a spathe, the heat developed is more marked. Thus in some tropical Arums, a difference of 10° or 12° has been noted between the outer air and the immediate vicinity of the flowers.

To sum up, in conclusion, it seems most probable that weakness of the sexual organs is the cause of the sterility of the Duchesse, and that this weakness is dependent upon excessive blossoming. If this be so, the indication is evidently to check this excessive flowering.—(*American Gardener's Monthly*.)

SALVIA PATENS.

WHEN the desire for costly ornamental plants, or those difficult to propagate, shall have given place to a taste for plants moderate in price and easily increased, then the merits of *Salvia patens* will, no doubt, be duly recognised. Perhaps the neglect with which it is at present treated, arises in a great measure from the ease with which it is obtained; but few plants can vie with it in colour, and certainly none is more easily propagated in quantity, for it produces seed in abundance, and the seedlings, unlike those of most plants of a similar kind, flower the first season, if afforded the same advantages as those usually given to China Asters. Besides, the old plants if taken up and stored like Dahlias, will afford plenty of cuttings in spring; but the roots seem more hardy than Dahlia tubers, for I find that every plant left out during the last winter is growing as vigorously as can be desired, although the winter was anything but favourable either for shrubs or plants, whose roots were not protected by foliage, as the frost and subsequent rains have been very hurtful to all such. This *Salvia*, nevertheless, promises to flower freely, and as the clear bright blue of its blossom is, as yet, approached by no other ordinary bedding plant, its culture has certainly been too hastily abandoned. Unfortunately, its blooms are easily broken off by rain, and it is questionable whether the defect can be overcome. Possibly if seed were only saved from plants which are found to withstand heavy rain, the progeny might retain the same property.

It is, however, more as a border plant, that I claim for *Salvia patens* a place in the list of garden ornaments. In the mixed herbaceous border this plant is most at home, and it is there that I would advise all who have a garden to plant it. Herbaceous borders are, I hope, fast coming again into favour, and as there are plenty of plants of the greatest beauty which never at any season present an unsightly aspect, we may indulge in variety without being offended by the ripening or decaying stems of plants, which it is hurtful to cut away too soon. *Salvia patens* is never unsightly, consequently it has a further claim on the attention of those who pride themselves on a choice collection or selection. Even in the smallest of such it deserves a place.—J. R.

FORCING PEAR TREES IN POTS.

THE accompanying *Beurré Giffard* Pears are from a small tree I had as a "maiden" from Mr. Rivers, and for three years I kept it in the open ground, but during that time it made very little wood, and the Pears were little good-for-nothing fruit. The autumn before last I dug it up, and after potting put it on the hot border, either at the end of September, or early in October. Last autumn it had plenty of heat given to its roots up to November, when it was put under glass, and kept without any artificial heat till February, and also quite dry. The house it was placed in was heated by two pipes running under the floor, which is of slate, resting on light iron beams. The tree stood close to the front ventilators,

which were generally open; it was not placed on the heated floor, but, of course, was exposed to the warmth arising from it. This amount of heat was at all times very trifling.

In June the tree was taken out of the house and plunged in the open ground. The Pears have now (July 26th) been ripe for a week, though we have had wet, cold, cloudy weather ever since the beginning of the month.

Doyenné d'Été treated in the same way, excepting that it was kept in a cold orchard-house, ripened in the last week in June. I have also to add, that this season the *Beurré Giffard* has grown vigorously, as well as carried two dozen Pears nearly all alike in size, those I send being of the ordinary size.—W. KINGSLEY, *South Kilvington, Thirsk*.

[The fruit of *Beurré Giffard* was well grown, and the flavour was everything that could be desired. Such a mode of treatment as Mr. Kingsley has adopted, and pursues with so much success, must commend itself wherever the finer sorts of fruit are cultivated with difficulty.]

THE GREAT ROSE SHOW AT BRIE-COMTE-ROBERT.

THE third annual Exhibition by the Rose-growers of Brie-Comte-Robert and the surrounding district, took place on the 14th and 15th of July. Nearly 82,000 blooms were shown, which for freshness and beauty are stated to have surpassed those of the two previous years. They were arranged on green banks at the sides of the tents, and in the centre were two masses of *Maréchal Niel*, one consisting of 300 blooms, and the other of 150 buds, surrounded by 200 blooms of *Madame Boll*. Other groups of from 200 to 1000 flowers consisted of *Général Jacqueminot*, *Aimée Vibert*, *Madame Boll*, *Gloire de Dijon*, *Triomphe de l'Exposition*, *Souvenir de la Malmaison*, and *Comtesse de Jancourt*.

Mr. Charles Lee, of Hammersmith, was elected the Chairman of the Jury, the other members being M. M. Haage, of Erfurt; Dickinson, of New York; Coërs, Moseenthin and Martin, Marest père, Paillet, and Fontaine. Among the seedlings, twelve in number, submitted to their notice, one called *Clemence Raoux*, was awarded a gold medal. It was raised by M. Granger, of Suisses, from *La Reine*, and is described as being large, of fine form and substance, white, with the extremities of the petals of a beautiful satiny rose. Other novelties spoken highly of are named after M. Edouard Morren, of Liège, and *Vicomtesse Vésins*, the one being from M. Granger, the other from M. Gantreau père. The latter has also a seedling, which, though not in flower at the time of the Exhibition, was subsequently seen and approved of by the Congress of rosarians which assembled at that time, and was named by them after Mr. Charles Lee.

On Sunday, July 21st, the Rose-growers, accompanied by M. Camille Bernardin, the President of the Brie Society, and Mr. Charles Lee, had the honour of being presented to their Majesties the Emperor and the Empress of the French, in the Salon de la Paix, at the Tuilleries, through the instrumentality of M. Rouher, the Minister of State, who had visited the magnificent display of Roses at Brie on the previous Sunday. There were also present at the reception the *Vicomte de Vésins*, Prefect of the Seine-et-Marne; the *Comte de Jancourt*, the Baron de Beauverger, M. Joseau; M. Bélin, Mayor of Brie, and the following Rose-growers—viz., Messrs. Cochet, Granger, Desmazures, Jemeau, Motteau, Vaurin, Jonas, Gantreau, Cécet, Dubois, David, and E. Laroche. The Rose-growers presented to Her Majesty a splendid "corbeille" of nearly three thousand cut Roses, which were surmounted by a large bouquet of "Impératrice Eugénie." Her Majesty being about to depart for England immediately, directed this "bed of Roses" to be transferred to the Universal Exhibition, where it was much admired.

According to M. Camille Bernardin, there are ninety-six Rose-growers within a radius of five miles of that place, altogether nearly one hundred acres devoted to the cultivation of Roses, and upwards of 2,000,000 of plants ready to be sent out next November.

BOOK.

Practical Treatise on the Cultivation of the Grape Vine. By WILLIAM THOMSON. Blackwood & Sons, Edinburgh and London. Fifth Edition.

WE have more than once expressed our high approbation of this volume. It is the sterling work of a first-class gardener, and no better evidence of the estimation in which it is held by horticulturists could be adduced than the fact that it passed through two editions in 1862, one in 1863, a fourth in 1865, and the fifth has just been published.

There are several valuable additions to this edition, and we will quote one:—

"STOCKS FOR TENDER VINES.

"Those who have paid most attention to the subject have come to the conclusion that many of the highest-flavoured of our Grapes,

which are at the same time the most delicate and difficult to grow with success on their own roots, will one day be grown with perfect ease when we have discovered the proper stocks for them, and that late-ripening varieties will be got to ripen earlier when grafted on earlier stocks. I have not myself proved the correctness of the latter, but have read of instances of it, and, reasoning from analogy, am prepared to believe it. Of the former I had a striking proof in the case of the Muscat Hamburgh on the Black Hamburgh stock: on its own roots I have not grown it above 2 lbs. weight, while on the Hamburgh stocks I have had it 5 lbs. weight, with larger berries and much better finished in every way than on its own roots. I have proved the Black Barbarossa to be a most unsuitable stock for the Bowood Muscat—so much so, that the fruit never ripened at all on it, while by its side the Bowood Muscat ripened perfectly on its own roots. The importance of this experiment lay in the proof it gave that a late stock pre-estimated the ripening of the variety grown on it; from which one is led to infer that an early stock, like Sweetwater or Chasselas Musque, would facilitate the ripening of late sorts inched on them. Of the excellence of the Black Hamburgh as a stock for such high-flavoured though delicate Grapes as Muscat Hamburgh, and the whole of the Frontignans, I have not the slightest doubt, and I have during last summer inched these sorts and many others on it, and recommend others to do the same, feeling confident that success will be the result."

ROYAL HORTICULTURAL SOCIETY'S EXHIBITION AT BURY ST. EDMUNDS.

WHEN our reporter left Bury St. Edmunds, all the miscellaneous prizes were not awarded, and some of them were not mentioned even in the first official prize list published in our advertising columns. Among those omitted were the prize and certificate awarded to our standard correspondent, Mr. Fenn, whose excellent collections of Potatoes, wines, and apianian subjects, we noticed fully at page 44. We are sorry that the prize was no more than £1, for we happen to know that in the course of his exhibitions at various shows, Mr. Fenn has expended fully fifty times that sum.

BRYANSTONE PARK, THE SEAT OF LORD PORTMAN.

WHEN, in speaking of Fontainebleau, I referred to the magnificent scenery that characterises our own island, and deprecated the strait and formal method of planting which obtains so much favour in France, I did not think that I should so soon have an opportunity of strengthening my own convictions on the point by a visit to this fine and well-timbered park; but when my worthy friend Mr. Radclyffe proposed on a fine bright day to drive me over, I should not have been flesh and blood (horticulturally), if I had refused; and amply was I repaid for the journey, especially as it enabled me to give to others some idea of the many fine places which are to be found in Dorset.

Bryanstone is situated in the immediate proximity of the town of Blandford, to the inhabitants of which it is an unmixed boon, as, owing to the kindness and liberality of its noble owner, they have free access to it, and may revel amidst its beauties. The house, which is a plain but well-proportioned building—designed, I believe, by Wyatt, and said to be one of the most comfortable houses in Dorset, stands on a gentle eminence, backed by a tolerably high ground, which is most admirably planted, and through which there are three different drives leading out of the park. The park cannot be less than three miles in length, and is of a very diversified character. In front of the house, at about a furlong's distance, there is a very pretty sweep of river, and just opposite the house this is considerably widened, and a pretty fall of water is well arranged. On the left side of the house there are six magnificent Elm trees, as beautiful and symmetrical examples of the tree as I have seen; we measured one of them, and found that at the base it was 20 feet in circumference, and at 4 feet from the ground 16 feet. The cliff, as the eminence running at the back is called, contained some very fine specimens of Cedar; most of which, however, were broken down by and deluged by the rain storm of last year, and consequently several large gaps have been made which it will require some time to fill up; but had one not been told they would have only been regarded as openings, so carefully has every appearance of destruction been removed. There are some very fine specimens of trees here. Thus there are two Plane trees nearly equal in dimensions. One of these we measured. It is apparently about 150 feet high, with a clear stem of at least 50 feet; at the base

it measured 18 feet in circumference. There was a Tulip tree 125 feet high; then that very beautiful tree, *Salisburia adiantifolia*, or Maiden-hair tree, with its gracefully falling tresses; while all through the cliff, a mile and a quarter long, there was a perfect forest of Box trees, Yews, and other evergreens, intermixed with fine specimens of deciduous trees. At some little distance from the house is the garden and ornamental pleasure ground, which is a happy combination of the stiff and natural styles of gardening. It forms a somewhat deep valley, with terraced walks on one side, on which were various beds planted in different styles, and giving some pleasing combinations of colour; among them I noticed a bed of *Viola cornuta* and Mangles's Variegated Pelargonium. At the bottom of the valley are two fine ornamental trees—*Catalpa syriacifolia* and *Paulownia imperialis*. The seed of the former was gathered by Lord Portman himself at Rome and sown here, while the *Paulownia* has been the admiration of a vast number of persons. One year it was covered over by a tent, but last year it bloomed without any protection. During the present season it has suffered very much from frost. And here a very noticeable thing was to be remarked—the tops of both trees were comparatively uninjured, but the branches at the base were completely scorched up. This was explained by the intelligent gardener Mr. Leach, as arising from the fact that a mist generally settles here in the evening, and that wherever that was the frost was more operative, while where the air was drier there it had less effect. I should have said that the *Catalpa* at 7 feet from the ground was 4 feet 6 inches in circumference. As I have mentioned frost, I may say that it was felt with all its severity at Bryanstone last winter. There is not a *Laurus tinus* in the place that was not cut down to the very roots. The *Ceanothus* and other shrubs trained against the wall were nearly, and I fear in many instances completely killed.

Bryanstone has for some years been noted for the excellence of its fruit and kitchen gardens, and here everything was in a high state of perfection, and bore ample witness to the energy and skill of Mr. Leach. The Grapes were an excellent and regular crop. Black Hamburghs were prominent, as the Grape on which the greatest dependance is to be placed; but other kinds, Muscat of Alexandria, Muscat Hamburgh, Golden Hamburgh, &c., were excellent. One house was interesting to small growers, as it showed what could be done in a limited space and with small means. The Vines are planted inside the house. A very little fire heat had been used, but an even and excellent crop was to be seen on all the canes. Mr. Leach's plan with his Grapes is not to syringe the foliage, but to drench the floors beneath, shut up at about half-past four, and thus get a thoroughly good steaming atmosphere. There was in the kitchen garden a very nice range of small Peach-houses on the Paxton principle, with trellises about 16 inches from the glass, and the walls at the back also covered with trees. On both of these there was a very good crop of fruit. The walls of both gardens were covered with well-trained trees of Pears, Cherries, Peaches, &c., and all bore evidence of care and good management. The crop of Pears especially promised well—better, indeed, than any I have seen this season. Here was the tree of the Bryanstone Gage, which was originated here, a cross between Cee's Golden Drop and the Green Gage, and said to be a fruit of very great merit. The kitchen garden comprises about three acres, and at its entrance is the comfortable house of the head gardener, with its neat little garden in front, where various kinds of the new bedding plants are tried; for Bryanstone is one of those places where one meets with a happy combination of the old and modern styles of gardening, and while novelties are not peep-pooled, yet the main features of the place are those which have to do more with the older style of gardening, when more reliance was placed on picturesque and landscape effect than on a blaze of colour for a few months. Then it is not a place where one thing is sacrificed to others, as we sometimes see, but flowers, fruit, vegetables, and trees alike are well looked after; and although not strictly speaking what is called a show place, yet its attractions are to my mind very much greater than some I have seen of greater pretensions. The demand on gardens such as these requires energy of no ordinary amount. The supplies necessary for the "London season," the fruits and flowers required for so many occasions, all require great thoughtfulness. And as far as I was enabled to judge, nothing escaped the eye of Mr. Leach; even the grass betokened careful management, and is kept in order by two mowing machines—one of Shanks' and the other of Green's, used with a horse. It is a real pleasure to go through a well-managed place like this; and if ever any of the readers of THE

JOURNAL OF HORTICULTURE find themselves in the vicinity of Blandford, I am sure that they will not regret going out of the way to visit Bryanstone.—D., Deal.

IN MEMORIAM.

MAY 15, 1866, DIED W. H. HARVEY, M.D., F.R.S., &c.

OF botanists, for the most part, the world knows but little, till a dry name is all that is left; and when we see that quoted and referred to often enough in books, and long enough—that is, for a few generations, some little interest about the individual man begins to be felt; his autograph becomes valuable, his photograph would be beyond price. Imaginative people wish they could know how he had passed his childhood; how he was led to his favourite pursuits; what help he had from others.

For once, then, let us anticipate these slow decisions of posterity, and while there are yet living hearts to be stirred and eyes to overflow with pleasure at his fame, let us do homage to one whose name is certain, in the generations to come, to be quoted and referred to, not only with respect as a general naturalist, but as the highest authority in that lovely branch of botanical study to which he for a long period of his life more particularly devoted himself—Seaweeds.

Dr. Harvey's native place was Summerville, near Limerick, in Ireland. His parents were Quakers, and of eleven children he was the youngest-born by five years; which difference in age rather deprived him of the natural play-companionship of his brothers and sisters; and he describes himself as having been "the pet of the house." "I scarcely," says he in one of his letters, "knew what it was to be crossed from infancy upwards"—a training which would in many cases have been fatal in encouraging conceit if not selfishness, but which left his constitutionally shy and sensitive nature scarcely self-confident enough.

Yet from a child he possessed an ample share of that resolute purpose without which nothing great was ever accomplished. Hence a passage in one of his letters, "I remember my dear mother's words to me when I was a proud and wilful boy, 'I had rather be a doorkeeper in the house of the Lord,' &c."

At thirteen he was sent to the school at Ballitore, where Burke had begun his scholarly career, and to which he, and all who were educated there, seem to have looked back with affectionate regard.

Here, then, and over the downs and cliffs of the wild county of Clare, on the coast of which the Harvey family spent a portion of most summers, roamed the blue-eyed, fair-haired schoolboy, who was to ramble half round the world before he left it. And like other children he collected shells, and caught insects, and picked up Seaweed, and gathered flowers and loved them; but, unlike most, when others forgot them or threw them away, or only half observed them, he bore them in his thoughts, compared one with another, kept them and reconsidered them, asked questions and looked at books, and so by insensible degrees acquired both information and a habit of observation which few suspected. He did nothing probably, at that time, which hundreds of others could not have done with equal ease had they cared. But the feeling which made him wish to do it and crave for further light was, like all other special tendencies of the mind, a special gift. "Wert thou to examine a single Moss—the most common—thou wouldst be in raptures—at least I was," he writes to a friend, when only sixteen, "the exquisite beauty and regularity of the fringe which surround the mouth of the capsule, &c., &c." At last, during one of these wanderings over hill and dale, he spied a tiny plant in the grass, which he did not remember to have seen before. If my memory of the anecdote be correct, there was some accidental peculiarity about the specimen which misled him, and, after the manner of young naturalists, he hoped he had found something new, and ventured the daring measure of sending it to a well-known botanist, Dr. Wilson, who seems to have recognised in his correspondent, even through a mistake, an amount of accuracy of eyesight which augured great things to come. This was no new species, he wrote, but he hoped the young sender would find many a new one before he died! The plant was the Little Field Madder (*Sherardia arvensis*), and young Harvey had taken it for a new species of Bedstraw (*Galium*). A few years later he was more successful. He had now left school and was in his father's house of business at Limerick; but even the desk left his love of nature fervent as ever, and all his holidays were given up to collecting and studying not one branch, but many, of life-development; and Dr. Wilson's prophetic hopes soon began to

be realised. First came the discovery of a new fresh-water shell (*Limnaea involuta*) in a mountain lake (Cromaglaun), near Killarney; and then another "find," which determined the whole course of his life—that of the rare Moss *Hookeria latevirens* in two quite new habitats. The discovery of a new habitat or place of growth is always a delight and triumph to a collector, and on this occasion young Harvey once more ventured to address a stranger. But the Moss he had found was Sir William Hooker's. Its generic name was given in his honour, and to him accordingly the letter was sent. And from this small occurrence grew not only a correspondence, but an affectionate friendship which continued unbroken in its intimacy till the death of Sir William Hooker in 1865, less than a year before that of his much younger friend.

The acquaintance with Sir William Hooker decided young Harvey's fate. He was now bent on quitting business and devoting himself altogether to science, and Mr. Spring Rice (the late Lord Monteagle), having appointed his elder brother Joseph to the Colonial Treasurership at the Cape of Good Hope, our William went out and worked under him until his death on his return home in hopeless ill-health the following year; after which our Harvey succeeded to the post and fulfilled its duties, with but one interruption (from illness), until 1841. But by that time hot suns upon over-studious habits had accomplished their evil work of prostration, and he was forced to resign the situation and return home.

Those were interesting years, however, which he spent at the Cape. The post suited him exactly in many ways. For the business part his experience under his father had fully qualified him, and he found or made leisure for his favourite pursuits. The opportunity, too, of seeing a new country and unknown flowers stimulated his ardour into full activity—even too much so for his bodily health, though not for the mental enjoyment. But the Cape life had its enchantments, and he often spoke of it—the tame ostrich he kept as a pet, and of the wonderful beauty of the wild flowers; their profusion, and the gorgeousness of their colours. "Those are as common there as Daisies," said he one day, standing before a bed of blazing *Gazania pavonia*. And then he told, further, of having recognised it at the Cape as a flower he had seen in his boyhood in Ireland, a solitary plant having once been imported to Ballitore! "If any one wants to love Botany let them go to the Cape," was his conclusion upon his own experience; but not even wild *Gazanias* can drive the taste into an ungenial head-soil.

Enough of this, however. The flora of the Cape and all other land floras had, even at that time, a formidable rival in the young naturalist's heart—the flora of the sea. He himself describes the west coast of Ireland—Miltown Malbay, &c.—as "the shore where, as a boy, I made acquaintance with the sea and its treasures, and became enamoured of them." And accordingly, though his first published volume was on the "Genera of South African Plants,"* his second was a "Manual of British Algae," which (re-edited in 1849), remains one of his most charming and useful books. When he wrote this he was settled in his own county, having been appointed first Keeper of the Herbarium at Trinity College, Dublin, and afterwards Professor of Botany—both which offices he held for the rest of his life.

We must never think of him, however, as a stationary closet naturalist. The flora of the sea was not to be understood without constant excursions to the coast in different directions; but such necessities were a pleasure; and in January, 1846, he brought out the first part of one of his larger works—the "Phycologia Britannica, or History of British Seaweeds;" all the species of which, to the number of 360, he figured and drew on stone himself. Next year came out the "Nereis Australis, or Algae of the Southern Ocean," with fifty plates only, but showing that even while at the Cape his mind had not been diverted altogether from this most favourite subject.

Then followed the "Seaside Book," which treated of "the sea and its treasures" generally, and is acknowledged to be "a model" of its kind. And in 1849, having received an invitation from two public institutions in America, he visited the United States, gave lectures, classified botanical collections, and explored the coasts from Canada down to Florida and the Keys. And thence, after a nine-months absence, he returned to Dublin laden with new specimens and information; the fruits of which were the noble three volumes of his "Nereis Boreali-

* Singularly enough to return to this subject in the last years of his life. He worked at the elaborate "Cape Flora," which he was bringing out in conjunction with Dr. Sonder, of Hamburg, as long as work was possible.

Americana"—i. e., an Account of the Seaweeds of North America. This work was prefaced by an Introduction, of which the Americans soon discovered the merit. The illustrated book was a quarto, and not very portable therefore, so they reprinted the Introduction separately as a pamphlet, and of it 20,000 copies were sold! It contains, indeed, a fine philosophy, besides invaluable general information on the specific subject of Seaweeds; and, like all his original compositions, breathes throughout the reverent and religious spirit, which was one of the strongest features of his character.

It is weary work telling, and we fear reading, of books; but without naming them no just idea could be given of Dr. Harvey's scientific labours. Before the issue of the three quarto volumes of American Seaweeds was completed, he was actually on the seas once more—this time to Australasia. The University of Dublin appreciated his ardent wish to make further researches, both for supplying the museum and extending the knowledge of the subject, and in 1853 he started for Ceylon in pursuit of more "Sea Treasures" of all sorts.

It was a serious undertaking alone, as any one who has laid out only a basketful of Seaweeds, picked up in a morning's stroll, will know. Think of the trouble involved even in that trifling business, although jugs of sea and fresh water, dishes, papers, muslins, &c., come to order when servants are in attendance; and then imagine what it must have been to lay out no less than 20,000 specimens without an assistant!—the manual labour often including fetching water in pails from a distance, and that after walking half a day perhaps in search of specimens, and having to finish it by the tedious process of laying them out. He often worked at that time from six or seven in the morning to ten or eleven at night. His own account of his outfit for this singular expedition was very amusing; one of his contrivances having been a set of wooden pails, fitting into each other so as to take up as little room as possible on board a ship, but which unpacked afterwards into separate vessels, for the numberless necessities of fetching and carrying. But the playful wit with which he gave these details in after years cannot be put on paper. He had a droll story, however, about his appearance when in full work. He was coming up from the shore one day in Van Diemen's Land (Tasmania), laden with Seaweeds as usual, in dust-coloured sea clothes, and with an enormous broad-leaved soft white hat on his head, when, as he was passing a low garden fence, within which were two children at play, one of them looked up, caught sight of his uncouth figure, and shouted to the other whose back was turned, "Oh, do come and look at a very ugly old man!" He described himself as much amused on the occasion, for at that time he considered himself quite young (forty-four).

Does the reader wonder how such lumbering articles as were necessary in such an expedition—a microscope and scientific apparatus included—were conveyed along those wild foreign coasts for so many hundreds of miles? The answer is, By sea almost always; he availing himself, as occasion served, of any boat or vessel passing the way he wanted to go: and in this rude and personally laborious fashion—for there was downright hard work to be done in the moving—he explored the shore round Australia from east to west, as well as that of Tasmania and New Zealand partially, not to speak of the off-lying islands, on one of which, Rottnest, south-west of Australia, a very good algological ground, he spent several weeks.

And here we come to a record he left of himself. We hinted before at Dr. Harvey's Christian piety. Born a Quaker, and brought up by very religious parents, he had remained in their communion for many years of his life. But after a time he followed the bent of the strong convictions which led him back to the doctrines of our church, was baptised, and joined the English communion. With what earnest feelings our readers may judge, when they hear that in Rottnest Island, in spite of algological researches and manual labour, he found time to write a series of dialogues on the differences of opinion which exist between ourselves and the Society of Friends. It fell out, as he describes in the preface:

"I was staying for some weeks, for the purpose of botanical explorations, on the little island called Rottnest, off the coast of Western Australia. I occupied a house belonging to the Government, but boarded with the pilot, whose small cottage hard by was one of the very few inhabited houses on the island. One Sunday evening, whilst waiting for dinner, I chanced to pick up an old number of the "Family Herald," and my eye rested upon a leading article on Quakerism, which struck me as being sensibly and fairly written. Yielding to a train of thought, not unnatural in one who had been born of Quaker

parents, but who had left the Society, I began to think over the plan of an essay on Quakerism, but soon abandoned the essay for the dialogue. . . ."

Here, then, we have conducted our naturalist Quaker-boy through childhood and youth to a manhood which had but gathered strength, not produced alteration of character. It is an enviable example. Never, surely, was a life more harmonious with itself than his. As far as feelings and tastes were concerned, the stanza'd poem he wrote on Miltown Malbay and Mober cliffs at nineteen might have been penned in Rottnest Island after forty. The same passionate love of nature—the same constant vision of the Almighty through His works—the same deep piety and personal humility—pervaded his whole being at both periods, and indeed came out in one shape or another in every phase of his life. Among the few books he took with him to Australia was George Herbert's Poems. "I found it good for the headache, &c.," says he, in a letter accompanying a copy he was giving away, with several of his favourite pieces marked—"The Flower," "The Elixir," &c. Later in life he learnt to love "In Memoriam." "It is not Tennyson's mind or fancy," he wrote in a moment of excited enthusiasm during his first study of the poem, "but the Holy Spirit speaking through him as an instrument, whether he so regard it or not. . . . I generally keep it in my pocket now," he added; "and it is in my thoughts, like Scripture, night and day. All this morning the lines beginning, 'How pure in heart and sound in head,' are in my mind." Eventually the two books lay together on the table by his sick bed at Torquay.

Assuredly scientific accuracy is not necessarily opposed to poetical susceptibility. Not only does the tone of his own fugitive poetical efforts prove this, but his keen appreciation of poetical excellence. Few men or women of the present day are half as intimate with Shakespeare as he was. It is even possible that an accurate mind has a keener relish for what is really excellent than any other, as it is certainly more alive to defects. Dr. Harvey in the critic's chair was equally refined and uncompromising. Nor could any one appreciate satire more thoroughly. He laughed about and enjoyed Tennyson's severe words—those, that is, of the hero of "Maud":

"The man of science himself is fonder of glory, and vain;
An eye well practis'd in nature, a spirit bounded and poor."

He often quoted it; and often, too, referred to the amusing sarcasm against "Professors" in the "Water Babies." But perhaps it is easy to enjoy satire which does not touch one's own particular weakness.

After exploring Australia and Tasmania (1853-4), Dr. Harvey embarked in a missionary vessel, bound *via* New Zealand for the Fiji and other South Pacific islands, where he interested himself deeply in the efforts then afoot for christianising the savage inhabitants, and helped to organise a society for providing the missionaries with useful medicines to give away. This cruise was one of his pleasantest recollections. On returning from it he sailed for Valparaiso, where, alas! more illness overtook and disabled him; but in 1856 he accomplished the home voyage, crossing the Isthmus of Panama, and so completing his circuit of the world, after a three-years absence.

A "Phycologia Australica" in five large volumes, corresponding with the "Phycologia Britannica," was the result of this tour—the sixty coloured plates of each volume drawn by Dr. Harvey's own hand. But constant desk labour, and the great quantity of lecturing which devolved upon him after his election to the botanical chair, were undermining a constitution never robust, though his tall frame and great activity might have led people to think otherwise. Nevertheless, the last great work he had undertaken (and that only a year after the commencement of the "Phycologia Australica," so that the two were going on together), the "Cape Flora," was carried on with as devoted a zeal as anything he had ever attempted, and to as good purpose. "Dr. Harvey's death is an irreparable loss to the colony as well as to science," writes a colonial friend afterwards; and the learned botanist who was joined with Harvey in the work (Dr. Sonder, of Hamburg), will be the first to endorse the opinion.

But there is yet another word to be said. In spite of all this pressure on his time, attention, and even health, there was one thing Dr. Harvey always found opportunity for—courtesy to ignorant correspondents. We put it strongly, but the words are not by any means too strong for facts. There was no limit to the appeals made to him for the names of Seaweeds, and the explanation of statements in his books, &c. People sent him the commonest plants for scarce ones, and even Zoophytes.

for seaweeds, and then complained that he had not figured them properly, in page so-and-so; or else grumbled that he called a plant "rare," when they had found it by scores—the *it*, on investigation, turning out to be something quite different! It may be even (for conscience awakens to a sad keenness after "it is too late to mend") that near and dear friends worried him occasionally by too frequent applications for help, which, however readily given, added one more weight to the over-weight of his work. But whether the appeals were justified or not by private friendship or community of interest, or were in themselves wise or foolish, the day never came when Dr. Harvey "answered a fool after his folly." As to the extent of his patience and kindness towards those who had the good fortune to be numbered among his friends, there was no limit to it, or to the amount of trouble he would undertake. The paper on "Coral," which appeared in the first number of this Magazine one year since, was examined and corrected by him on his dying bed; the short notes, written in pencil as he lay, breathing still the happy humour which was one of the most striking characteristics both of his conversation and letters. Dr. Goulburn might have had Dr. Harvey in his mind when he wrote his fine passages on Wit ("Idle Words," pp. 86, 87):—"It is pleasing to see in experience that oftentimes the men of most depth and seriousness of character—the men who in their closets have taken the most earnest view of life, and have cultivated heavenly wisdom most largely—have also been men of lively fancy, sprightly and agreeable repartee—seem to have had within them a spring of joy and merriment bubbling up when the obstruction of serious affairs was removed, and covering with fertility even the leisure hours of their lives."

A happy marriage, in 1861, to a lady he had long known, gave Dr. Harvey at last the comfort of a domestic life which his former wanderings had rendered impossible. Our imperfect account can only touch slightly on this, and must leave untouched altogether his private friendships, sorrows, and interests; but no apology seems necessary for this, our chief object having been to shadow out a man of learning as he was in this particular case, and as he might be often, did the foundation-stones of personal humility and faith in unseen Omnipotence underlie the knowledge acquired in the schools. Without great advantages or high birth, he stands unrivalled as a master in one particular branch of study: and this is much to say of any man, yet not too much even of the contemporary of Agardh, between himself and whom no rivalry but only community of pursuits existed. Such of our young readers as may hereafter wander on English or foreign shores, and tosa over the "wreck" at their feet, will do well to think of this, and remember that in the works of God there is nothing "common or unclean"—nothing unworthy labour and attention—nothing which, when studied well, will be found to have been studied to no purpose.

In 1865 "the silver cord" was beginning to be loosed," and the medical men sent Dr. Harvey to the Pine forests of Arcachon, whence he removed later in the season to Biarritz. Arcachon failed, and Biarritz did no more than give pleasure. "This is a charming place," he wrote of the latter, "and more agreeable to me than Arcachon, for I love the sea, and don't soon tire of it. . . . You would be charmed with the rock pools. Some of them are studded with the purple Echinus, just as at Miltown Malbay; others are full of weeds; and one of the commonest is *Gigartina Teedii*, growing in rich branches—so tempting! *Taonia* is also common, and *Ginnania*, and dear knows how many more! If I had but paper and rags I should like to be at them. But we have to go to Bayonne for paper, and are putting it off day by day like lazy folk." This was said half in jest, for he brought back a beautiful collection on his return to England in the autumn—many, as usual, for distribution among friends.

Even at that time, to a dispassionate eye, Dr. Harvey's appearance left no reasonable ground for hope of his recovery; but it was not till a fresh attack of hæmorrhage from the lungs in February, 1866, that the last alarm was given. And even after that, and when a prisoner to his room, his cheerful patience and still recurring playfulness went near to cheat his nearest and dearest into hope. All that affectionate skill and sympathy could do was done to both relieve and soothe him. Beautiful flowers came to him from the Botanical Gardens to cheer his confinement, and friends sent him flower-baskets for growing the commoner spring flowers in a sick-room as if in a garden; and this was his greatest delight. "It is quite an amusement," he wrote, "to watch them from day to day. I like them better than the grand things that come from the

Botanical Gardens. They remind one of the 'enviable early ays,' as poor Burns calls them."

The little flowers he welcomed and watched so affectionately were Crocuses, Primroses, Hepaticas, and some few others grown in a shallow dish in mould. This was in March; but before it was over he received the last medical order for a move to Torquay; and what might have been merely a weariness was rendered pleasurable by the fact that the widow of his friend, Sir William Hooker, was living there at the time. To her house, indeed, he was taken on his arrival, after a harassing sea-voyage which he was but little able to bear; and he moved no more till he was carried to his grave. She who for more than half her life had been as a second mother to him in affection, now did a mother's part by him for the last time, and helped an afflicted wife to comfort and soothe the weary hours of sickness and weakness which followed.

"Three cheers for the Magazine!" he had written just before leaving Dublin, and when the prospect of the Torquay visit had quite raised his spirits. And he alluded here to the expected first number of this publication. "Three cheers for the Magazine! Who knows but we mayn't write for it by-and-by? But the poor old brain is not worth much at present, and dear 'Flora' has not been looked at for a fortnight."

Alas, no! The night was at hand in which no man can work; but the dawn shone very bright to him beyond. For let no one suppose his cheerful words implied ignorance of his condition. He knew it even better than those around him, and wrote of it to friends; while to the one most bound to him he spoke frequently and openly of the "joys which he anticipated."

"There could not be greater peace, more steadfast trust in his Saviour; his mind clear, and so calm and happy," she wrote three days before his death; adding—alluding to little nosegays of spring flowers which were sent him in letters almost daily—"He likes the little flowers; even the new budding green leaves give him pleasure; his feelings are as fresh as in his days of health." The child had indeed, and in this case by God's blessing, been father to the man.

The day of his death he was read to for the last time—the 103rd Psalm, the Lord's Prayer, and the Sixth Collect after Trinity. Not that it was the Collect of the season, but he wished for it. And could a more fitting prayer for the dying naturalist have been found? "He died to-day in the greatest peace both of mind and body," was the record of May 15. May it be equally true of us all at the appointed time! By his own request his mortal remains were buried at Torquay. He himself walks "beside the waters of comfort. . . ."

May this record, slight as it is, of the individual man, have some interest for those who shall meet hereafter, in the fields of literature, the name of Harvey the naturalist!—Mrs. A. GATTY (in *Aunt Judy's Magazine*.)

EXTRACTS FROM THE REPORT ON THE BRISBANE BOTANIC GARDENS.

THE Tea-beds are planted to test the climatic effect on the plant in different situations; and, as recent intelligence informs us that the several attempts made to rear the Tea plant, both in Victoria and South Australia, have signally failed, it will, I imagine, be especially gratifying to all those who take an interest in the material prosperity of Queensland, to learn that the groups of Tea plants, both in easterly and westerly aspects, never exhibited a more vigorous, healthy, or exuberant growth than now. Some of the other beds comprise plants of Allspice, Tamarind, Chocolate, Crotons, &c., and all are giving evidence which encourage the hope that they can defy the severity of the Queensland winter. The ground which was set apart last year chiefly for the culture of Oranges, Vines, Pine Apples, and any other choice fruits which it may be found necessary to produce in a secluded and sheltered situation, has been considerably enlarged.

During the year, the botanical treasures have been largely enriched by copious and very valuable contributions of seeds and plants from various parts of the globe, especially from Java. In the collection from J. E. Teijsman, Esq., Director of the Botanic Garden, Buitenzorg, Java, was a Wardian case of *Cinchona* plants, comprising three of the most valuable species—viz., *succirubra*, *Calisaya*, *laucifolia*, and accompanied by a sample of seed of the *C. Calisaya*. Amongst the more, and in some respects highly, ornamental of the remainder of the contributions may be mentioned six Wardian cases of plants, amongst which are the Guinean Oil Palm (*Elaeis guineensis*), which produces the African palm oil; the Sago Palm (*Arenga saccharifera*), noted for yielding sago, sugar, palm wine, and fibre for cables and cordage; the Betel Nut (*Areca catechu*); the Durian (*Durio zibethinus*); the Litchi (*Nephelium Litchi*); the Mangosteen

(*Garcinia Mangostana*); the Clove (*Caryophyllus aromaticus*); the Nutmeg (*Myristic mosehata*); the Cassia Oil plant (*Cinnamomum Cassia*); the Vanilla (*Vanilla aromatica*); the Black Pepper (*Piper nigrum*); the Chocolate or Cacao (*Theobroma cacao*); the Bitter Wood (*Quassia amara*); the Gamboge (*Garcinia pictorialis*); the Camphor tree (*Dryobalanops camphora*); the Caoutchouc or India-rubber (*Siphonia elastica*); the Gutta Pehra (*Isanandra gutta*); the Croton oil plant (*Croton tiglium*); the Poison tree (*Antiaris toxicaria*); the Benzoil (*Styrax benzoin*); the Sand Box tree (*Hura crepitans*); six varieties of Plantains; six varieties of Mangos; and eight varieties of Sugar-cane. The next contribution which I have to acknowledge, is a quantity of Cinchona seed and a large variety of Peruvian Maize, from C. Ledger, Esq.; also, a very valuable case of bulbs from Messrs. J. Veitch & Sons, of the Royal Exotic Nursery, London.

I am glad to say that the desire which I have so long cherished, of successfully cultivating in the gardens the most valuable species of the Cinchona, has at length been realised. Some of those received in the Wardian case from Java have been planted out in a sheltered and otherwise favourable situation; although not more than six weeks in the ground, they have made very considerable progress, and give every indication of adaptability to the soil and climate of Queensland. The seed sown, comprising three species (*succirubra*, *Calisaya*, and *officinalis*), has also germinated successfully, and hundreds of the plants will be quite ready for planting out in the ensuing spring. The Durion (*Durio zibethinus*); the Bitter Wood (*Quassia amara*); the Chocolate (*Theobroma cacao*); and Croton Oil plant (*Croton tiglium*); have likewise been transferred to their permanent positions, and give evidence of a most healthy and vigorous growth. Whilst on this branch of the subject, I think it right to observe that there are three or four of the new and most precious plants, such, for example, as the Mangosteen, the Vanilla, Nutmeg, and Clove, which I am inclined to believe, owing to the severity of a portion of our winter, would thrive much better a few degrees farther north; and with that view, and in order to insure safe provision for such very delicate tropical plants as the colony might receive from time to time, I would respectfully suggest that a piece of ground should be set apart—say at Rockingham Bay, or at some place in that latitude—as a nursery plantation under the special direction of the Government. A considerable number of these plants are now (March 28th), ready for removal, and if a plantation such as I suggest were ready to the north, the ensuing spring would afford a most opportune time for transporting them thither, together with collections of the Cinchonas and other rare and valuable plants.

The donations of Maize, numbering in all 130 varieties, forwarded specially for experiment, have been carefully tested, and in no instance have they equalled, much less exceeded, the Maize commonly cultivated in the colony. The large Peruvian, the only variety from which great things were expected, and which, from the size it attained in the first stages of growth, induced a belief in its superiority, proved to be a failure in the gardens; although I hear from one person to whom I distributed some of the seed, that it produced remarkably well in the neighbourhood of Ipswich. Those in the gardens grew to a great height, some of them upwards of 14 feet, but, singular to say, very few of them yielded more than one cob, and that was so diminutive in bulk and thinly grained as to render it scarcely worth the trouble of gathering.

Of the useful trees already growing in the gardens, I may mention the following as having fruited and seeded for the first time during the year—a fact which may be regarded as the best proof of their effectual acclimatisation—viz., Allspice (*Eugenia pimental*), Avocado Pear (*Persea gratissima*), Tallow tree (*Stillingia sebifera*), Cherimoly (*Anona cherimolia*), and Mango (*Mangifera indica*). The trees and shrubs which I noticed in previous reports as having fruited and seeded, continue to produce excellent crops, the size and quality of the fruit increasing as the trees advance in maturity. The Coffee shrubs have yielded this season an unusually large and fine crop, and continue to be a general subject of admiration among visitors. The Indigo, Cinna-mon, Cotton, Sugar, Tobacco, Ginger, Cassava, &c., are in a flourishing condition.—WALTER HILL, Colonial Botanist, and Director of Botanical Gardens.

NOTES AND GLEANINGS.

At the Midsummer examination of the Royal Horticultural Society, seven candidates appeared and received the following certificates:—

	Floriculture.	Fruit and Vegetable Culture.
1. William Spinks.....	1st	2nd.
2. B. Wynne.....	1st	Extra 2nd.
3. W. Stewart.....	0	3rd.
4. J. McArdle.....	2nd	0
5. F. Hardesty.....	2nd	3rd.
6. F. M. Burbridge.....	1st	2nd.
7. James Williamson.....	2nd	0

The first six are Chiswick students, and the seventh was recommended by Mr. Gibson, of Battersea Park, where he is at present employed.

— THE Meeting of the Pomological Congress of France is to be held this year in Paris, and the fruit exhibited on the occasion, will, after the labours of the Congress are over,

be transferred from 84, Rue Grenelle St. Germain, to the horticultural department of the Universal Exposition. It is expected that this year there will be one of the finest exhibitions the Congress has ever held, although those at Montpellier and Bordeaux were marvellously successful.

— THE following Floral and Horticultural Societies have announced their intention to hold exhibitions during the present month, in addition to those we published last week:—

August 1st	Willesden.
" 7th	Largo (Edinburgh).
" 8th	Meldraro N.B.
" 13th	St. George's and Prior's Lee (Wellington, Salop).
"	Tewkesbury.
" 14th	Elton, N.B.
" 15th	Hickston and Shipley.
"	Kirkcubbin, N.B.
"	Uttoxeter.
" 20th	Burton-on-Trent.
" 21st	Kempsey.
" 22nd	Great West Riding (Wakefield).
" 24th	Manchester.
" 27th	Bristol and Clifton.
" 29th	

WORK FOR THE WEEK.

KITCHEN GARDEN.

Broccoli, continue planting out; also *Greens* of all kinds. *Cabbage*, sow Vanack, Battersea, or Fulham. A few seeds of the Convo Tronchuda, or Portugal Cabbage, may be sown, and the plants protected in a frame during winter. The dwarf variety is the most delicate in quality. If aphides attack the Cabbage tribe, water with clear lime water, and stir the ground frequently. *Celery*, reserve some of that pricked-out for planting-out next month, to come in late in the spring; it should be protected when necessary in winter, but not blanched by earthing-up till spring. *Endive*, sow, and continue planting good beds, increasing the elevation of the beds as the season advances. *Lettuce*, let a good sowing of Bath Cos be made directly. This will stand all the autumn, and on well-prepared ground will produce fine Lettuces; some of the later plantings from this sowing may be covered with inverted garden-pots after tying up. Some fine large Lettuces can be preserved by such means until the early part of the winter. *Potatoes*, if this showery weather continue much longer we may expect some indications of the Potato disease; to counteract in some measure its baneful effects we would advise all who may be troubled with it to use quicklime, slaked very shortly before using it, applying it whilst the atmosphere is dry, and so thickly as to thoroughly whiten the whole plant. Next to lime, as a practicable and useful application, all charred refuse, sawdust, old tan, and vegetable waste may be employed with an unsparing hand. *Sticks for Scarlet Runners* and for the climbing varieties of *Kidney Beans* cannot be obtained in many cases, and in such attention must be paid to topping, which has generally the effect of inducing abundant produce.

FRUIT GARDEN.

At this period a very general stopping of late growths and laterals should take place; both in wall trees and espaliers, it may, for the most part, be accomplished by pinching off the extreme points. This is particularly necessary where it is desirable to carry out a dwarfing system. With regard to other forms, however, there can exist no reason for suffering over-excited trees to continue producing wood, which can never be perfectly ripened, and which must be pruned away in the ensuing winter. The necessary consequences of this proceeding are a greater concentration of sap in the neighbourhood of the fruit, an inducement to the axillary buds to prepare for development, and a powerful incitement to equalisation of the sap, thereby encouraging a greater uniformity of growth. Attend well to fruit trees of all kinds. Little superfluous wood should, if possible, be formed on tender fruit trees after the middle of this month. Not only the fruit but the wood for the ensuing year must be ripened. Even Pear, Apple, Plum, and Cherry trees, are amenable to this law in some degree. Continue to make new plantations of Strawberries. The merits of the Downton should not be overlooked. If well grown, and allowed to become perfectly ripe, which it only is when nearly black, few varieties, if any, can compete with it. Where Gooseberries and Currants are required to be preserved till a late period on the plants, all superfluous shoots ought to be cleared away previously to netting. The Red Warrington and the Small Rough Red are suitable for this purpose.

FLOWER GARDEN.

Cloves, Carnations, and Picotees should be layered at once; road-scrappings, finely sifted, are the best material for striking them in. Let the pegs for fastening them be made from common Fern, which answers the purpose well. All plants growing over Box or other edgings should be cut back, taking the under branches, as by this means the plants do not exhibit the appearance of being clipped. Remove dead flowers from Roses, Pinks, &c., as often as required. Dahlias, Hollyhocks, Sweet Peas, and other tall-growing plants, should be regularly gone over and tied up, taking particular care not to tie too tightly. Hoe, rake, and clean borders and beds; not a weed should ever be suffered to seed if there is a possibility of preventing it. Roll, mow, and sweep daily if the weather continues showery, and shorten back strong-growing shoots of Roses, if they require it. Let biennials be transplanted, and look sharply after the propagating ground. The success of next year's masses will depend in no small degree on the vigilance of the next three weeks. The Mule Pink is an invaluable old flower; cuttings should be made, or, which is preferable, let the plants be layered. Continue to fill up blanks.

GREENHOUSE AND CONSERVATORY.

Although flowers of all kinds are at this period most abundant out of doors, yet some large and well-grown specimens of choice plants will always afford interest in the conservatory. To accomplish this, large shifts must be had recourse to, accompanied by improved modes of potting—viz., extra drainage, together with a greater reliance on turfy soils in a lumpy state than upon complex components. The climbers must at all times receive much attention in this house. Stopping gross wood is far too often neglected. Above all, secure a thorough freedom from insects, together with a most cleanly system; all this presupposes plenty of labour directed with judgment. Look well after stock intended to enliven the shelves of the greenhouse in the dead of winter. To accomplish this object, many plants deemed of little import at this season will then be most acceptable. Common Anemones, potted three or four in a pot, and placed in a comfortable frame with the Neapolitan or Russian Violet in September, may be introduced to blossom on the shelves throughout November and December. The common single Blood Wallflower also, if sown in March, the leading shoots pinched out in June, and potted then in a moderate-sized pot, generally produces a good bloom in the depth of winter. Many more plants of the kind might also be enumerated. All greenhouse plants will be benefited by exposure to the natural atmosphere: the dews of heaven are more refreshing and invigorating than artificial moisture, and will always beat the syringe. It will be wise to finish at once the potting of all specimen plants. They have yet time to make roots, but if left till late in autumn they had better not be potted at all. No position can be worse for a plant at all impatient of wet than when it is surrounded with fresh soil for months, when the roots should be in a comparatively dormant state.

STOVE.

The business here is mere routine. Propagation having been attended to, together with high cultivation, little remains but to pay every attention to perfecting the wood already made. This must be accomplished by a freer circulation of air, and by a somewhat less amount of atmospheric moisture. If any of the very-early-growing Orchids are disposed to sink into a state of rest, remove them to a comfortable shelf in a moderately warm house.

PITS AND FRAMES.

Sow Mignonette for blooming in the autumn. Cuttings of choice Verbenas should be put in for store plants next season. Sow *Nemophila insignis* for blooming in autumn, either in a bed or in pots, for planting out. Pink pipings that were put in early and that are rooted may be planted out. Cuttings of China, Noisette, and other Roses should be put in under hand-glasses, or, if wanted in large quantities, into a shady border without glasses. Cuttings of *Pelargoniums*, *Salvias*, *Petunias*, &c., should be put in for next year's store. No heat is required for striking at this season, except sun heat, which prevents damp.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

FRIDAY will be a day long remembered on account of its heavy, almost continuous rain, doing great injury to hay that

was still out, but proving very beneficial to all fresh-planted crops, washing the fruit trees thoroughly, and doing much where the crops were not laid to make the corn fill the bushel. We had made up our mind to water many things, when the twenty-four-hours rain saved us all the labour, and enabled us to do much in-door work, as cleaning pots, preparing soils, clearing sheds, grinding tools, going over houses, regulating trees in orchard-houses, and much other work, which would have had to remain longer undone but for the rainy day. One advantage of such a day is, that there is no uncertainty about it. Sometimes we have rain heavy and fast for an hour or two, and then it comes and stops, and comes again, and there are doubts as to whether it would be best to remain in-doors or to turn out, and in all this moving out and in there is loss of time; but on Friday there was needed no second thought about the matter. When the men were in-doors, true policy said, Keep them there; and the only regret about the matter was as to how the labourers were to get home and dry their clothes.

A gentleman lately told us he was thoroughly convinced of the importance, not only in a benevolent but also in a truly self-interested point of view, of preventing his working men being thoroughly drenched at their work. He found that the natural lassitude afterwards did much to counteract the value of the work thus obtained, and he entered feelingly into the difference between the man who had been drenched, and went home and put on dry clothing, and the man who had to keep on his wet clothes, and put them on wet the next morning. The opposite difficulty with him, however, was how to keep his men employed in these wet days, as mere idleness had about as bad a future effect as getting wet, and keeping wet. We never knew a garden where this serious and somewhat solid objection did or need apply. Our wet days are generally our very busiest. Of course all such matters require a little forethought, and sometimes work may be delayed rather long just because it can be done as well in a wet day as in a dry one. Most jobs about houses—washing, cleaning, scrubbing, tying, pruning, top-dressing, &c.—can be done much better in a wet day than a sunny one—that is, with more ease to the workman; and a little consideration will thus insure that a wet day in a garden shall be the farthest removed from idleness and its natural consequences. The very change of work and scene promotes activity.

Potatoes.—The previous rains hardly watered our Potatoes that were planted moderately deep. We hope we shall now have breezes and sunshine instead of a close damp atmosphere, which, with the wet at the roots, would tend so much to promote the progress of the disease. With the exception of that peculiar and limited instance of the stem rotting, to which we lately alluded, we have met with little the matter with Potatoes this season, and the early crops have been very prolific, yielding an abundance of fine even-sized tubers. One of the finest-looking Potatoes at Bury Show was the Birmingham Prizetaker, something in shape like *Mona's Pride*—a flat, broad Kidney, showing no depth of eye. Would some of our readers well versed in Potatoes tell us the good properties of this Birmingham Prizetaker, and if it has short or long handle-tops? This latter is of less importance where ground is plentiful, but it is of great consequence to many where ground is scarce. All who send out Potatoes should be as careful as possible that the sample should be true to the variety. We were recommended to try an Ashleaf Kidney, which was said to have little more top than Veitch's Prolific, and on searching through the piece a few subjects might be found of such a character, but the bulk of them have gone beyond all bounds, there being many tops fully a yard in length, and vastly more luxuriant than the tops of the Early May, which comes in well as a second Kidney, whilst with us this season the Prolific scarcely ranged above a foot in height, rarely reaching 15 inches, and yet it yielded a very good return, much better than these long sprawling tops.

Those who have a few old tubers of Kidneys left, and would plant them now, will obtain some waxy Potatoes from November, and onwards. In the first dry weather, we will raise the most forward Potatoes, so as to plant out more winter vegetables.

Cucumbers.—Our first beds in frames are still bearing, but showing a little weakness, and would be the better of a little bottom heat, which we will give as soon as we can, by turning over the outside bank or lining. Pruned out the more exhausted shoots, to give more room to the young growth, and a little top-dressing and manure-watering will cause the plants to do more work yet. Went over those on ridges, thinning, stopping, regulating, and gathering a fine lot for Gherkins for

pickling. We have failed to secure a good variety of ridge Cucumber. We have sent for several, but they turn out to be nothing but the Short Ridge, only a little larger than the Gherkin Cucumber, very useful, no doubt, in its way, and very good for those who like Cucumbers when cut young—say from 4 to 6 inches in length; but what we want to obtain again is a hardy black-spined Cucumber, that when crisp and young would run from 9 to 12 or 15 inches in length. A hardy Cucumber of this description would be a great acquisition to amateurs, who could command a mound of dung, with earth over it, but who cannot well have hand-lights or frames.

Vegetable Marrows.—Regulated these a little; they have been producing freely for several weeks. In general, we leave the Vegetable Marrow mostly to itself, and after we obtain an early gathering we allow it to run and climb as it likes, and then it is sure to produce plentifully, without any trouble. We have taken the hand-lights from the Marrows, but still let them stand over the centre of the Cucumber plants, as the collars thus protected from heavy rains are less likely to canker.

In cold exposed places, we do not think there is any better plan for these Cucumbers and Vegetable Marrows, than the trench supplied with less or more of fermenting material, and the earth over it. The hand-light is also desirable at first in cold places, and if these mounds could be made up before the 1st of May, then we would advise sowing three or four seeds beneath each glass, instead of transplanting plants raised elsewhere, towards the end of the month or the beginning of June.

After trying many kinds of Vegetable Marrows—Wrinkled, Custard, &c., all very good, no doubt, to those who like them, and can cook them properly—we have fallen back on the old smooth, long, yellow Vegetable Marrow, and believe it now to be the best, especially when used young. "How young?" Well, when growing freely, cut them when from 5 to 7 inches long, and about 5 inches in circumference, and with a good piece of the stalk attached to them. "How cook them?" There are many ways. This is how, after instructions from the cook, we managed our first Vegetable Marrows: Gather them with stalks as above; wash clean, and rub with a soft cloth to make snre. Put them into boiling water, and try several times after from ten to fifteen minutes, with the point of a fork, and if that goes in easily the Marrow is cooked. Take it out, split it down the middle, remove the seedy soft part of the interior, sprinkle what remains with pepper, salt, and a little piece of butter, and there is a luscious dish for an epicure, too rich for us to use above once or twice in the twelvemonth.

Mushrooms.—These have been very good this season, the last bed in the house made on the ground has not been so fine as the earlier ones, partly because they were raised on shelves, and partly because the house was frequently warmer in summer than was desirable. The advantage of having the bed on the ground in a shed out of doors is the great equality of temperature enjoyed by the bed, which temperature is more variable in a house. We will take the first favourable opportunity of clearing out the beds in the house, and take care of the products too, as, when the spawn is quite wasted, such manure comes in for growing many crops that need the help of sweet, decayed manure.

The first piece of a bed in the open shed has been earthened up, and a little litter thrown over it for some time; the second piece, perhaps about 14 inches deep, is just spawned and well beaten down. It was thus made: A layer of about 6 inches of rough strawy litter at the bottom, which would be compressed by the weight over it into 3 inches; then every eight days or so we added about 4 inches of short litter and droppings from the stable, in about equal proportions and mixed, all the longer litter being shaken out. This lay loose for a few days to become partially dried, and then was trodden or beaten rather firmly, and therefore it did not heat violently. Another and another layer were added in the same way, but if the weather was wet, and the dung from the exposed dunghill wet, we spread it and partly dried it in a shed before using it. In addition to this, if very wet, we threw it into a heap to heat and dry itself by fermentation. We did this to secure the comfortable dryness, though aware we thus lost some of the fertilising properties. We often do this with the last layer, from which we take more of the litter, and, therefore, have more droppings in it; and one reason for heating this last layer is, to kill the Oats that otherwise would grow, and it is as well to have nothing growing on the surface of the bed except the Mushrooms. In these layers we often throw a little turfy dry loam—say a twentieth part of the whole, or even more, up to a twelfth part.

By such a plan the bed never heats violently, and the less it does so the longer will it maintain a genial heat of from 70° to 80°. When the top layer is well beaten, and the heat is declining to less rather than above 80°, we insert the spawn and beat all over. It is safest to have the heat on the decline, for if it rise much higher it is apt to injure the spawn, and if it does not rise high enough it is an easy matter to add a couple of inches of droppings, heated as already stated.

So much as to one part of our practice, in answer to a correspondent who wants to know the best and easiest way to make a bed. We may add that we put about 1½ inch of fresh soil over the bed, when there is no danger of over-heating, generally a few days after spawning. We know of no simpler and better plan where the proprietor of the bed has only the droppings of one or two horses to go to. They might be put thinly on the bed every day until the last layer, or saved in a shed for a week or ten days. Such beds ought to do well if the spawn is good and they are not injured from over-heating. We often make them with far inferior materials. We have often made the bulk of stubble, long litter, and tree leaves, separately or combined; but in all such cases we liked to have from 2 to 4 inches of droppings with only a little litter, or good half-decayed dung, on the surface. A bed so made in an open shed last August has been yielding frequent gatherings up to within a week, and it will be removed to make way for our last out-door piece this season, and then we commence with our house-beds. These, when shallow, should be of the best materials—that is, more droppings. Our beds on shelves there—mere wooden spars for a bottom—always do best, that is, better than beds on the ground, and that we attribute to being able to give them more easily the temperature they like and their greater freedom from woodlice. We are rarely troubled with woodlice in our shed-beds, even in the greatest heat of summer. Our shelf-beds in the house when finished, earth and all, will be about 9 inches deep in front, and 12 inches, or a little more, at back. For constant supply we like these thin beds. It takes little to make them, and they are, if anything, more sure than large deep beds, though the latter ought to last longer, and they generally do. Once more: Guard against extra dryness and extra moisture in the materials, and over-heating in the bed, and you secure the chief elements of success. You can always add heat by covering.

We will gladly answer any question, for even to enter into every minute detail according to circumstances would take half a number, and articles that thoroughly exhaust the subject have been given to suit different cases. We have said little on the matter lately, as though we are learning something fresh almost every day, it does not do to harp too much on one string.

FRUIT DEPARTMENT.

Managed to go over the most of our fruit trees, fore-shortening and summer-pruning, leaving only a few shoots as yet unstopped to carry on growth and prevent the plump buds, which we wish to mature and retain, running off into slender wood shoots. The wet day or two enabled us to thin wood and fruit in the late orchard-house. In the latter, by a mistake as to syringing, a little red spider was showing itself for the first time, and soap and sulphur washings were resorted to, we hope in time. By early closing one house we shall gain our object as to having a succession of crops. Our Peach-house is not yet quite empty, and the fruit in the first orchard-house is swelling freely. We have given all the trees a good soaking with manure water, having just stirred the surface soil for half an inch or so to let the water in freely. Proceeded also with pricking out in the bed alluded to last week, and layering in pots Strawberries for forcing.

ORNAMENTAL DEPARTMENT.

In addition to mowing, sweeping, rolling, tying, and regulating, potted a number of plants intended for autumn and winter, and took the opportunity of striking Pinks, planting out those struck along with Antirrhinums, Canterbury Bells, Sweet Williams, so useful for early cutting, and Pansies for late blooming. We also proceeded with tying up Dahlias, securing Hollyhocks (and time, too, for the wind and rains were telling on them), and other tall herbaceous plants. Alas! for the Roses, Friday almost destroyed the beauty of all those in bloom. All shrubs intended to bloom in winter for balls should now be potted firmly in rather small pots that the pots may be crammed with roots before the end of autumn. Most likely we shall have fine sunny weather after these rains, and in that case the pots of Azaleas and other tender plants out of doors should be protected from the sun heat. The top, in

general, will suffer little; but few tender plants can stand the variable temperature at the roots, caused by absorbing the sun's most powerful rays during the day, and then being cooled down by evaporation and radiation into a clear sky at night.—R. F.

COVENT GARDEN MARKET.—JULY 31.

CONTINENTAL supplies are again very heavy this week, many thousands of packages coming on alternate days. A large proportion of these importations find buyers in the northern and midland markets, proving a great boon to the industrial populations of those districts. Our own reports are but a repetition of last week.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples $\frac{1}{2}$ sieve	3	0	4	0	Melons..... each	3	0	5	0
Apricots doz	3	0	4	0	Nectarines..... doz.	4	0	8	0
Cherries..... lb.	0	6	1	6	Oranges..... 100	8	0	14	0
Chestnuts..... bush.	0	0	0	0	Peaches..... doz.	6	0	10	0
Currants..... $\frac{1}{2}$ sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black..... do.	5	0	6	0	Pine Apples..... lb.	4	0	0	0
Figs..... doz.	3	0	6	0	Plums..... $\frac{1}{2}$ sieve	2	6	5	0
Filberts..... lb.	0	0	0	0	Quinces..... doz.	0	0	0	0
Cobs..... lb.	0	9	1	6	Raspberries..... lb.	0	0	0	8
Gooseberries..... quart	0	4	0	6	Strawberries..... lb.	0	6	1	6
Grapes, Hothouse..... lb.	2	0	4	0	Walnuts..... bush.	10	0	20	0
Lemons..... 100	8	0	12	0	Green..... per 100	1	6	2	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes..... each	0	3	0	6	Leeks..... bunch	0	3	0	0
Asparagus..... bundle	0	0	0	0	Lettuce.... per score	1	0	0	0
Beans, Kidney, $\frac{1}{2}$ sieve	4	0	0	0	Mushrooms.... pottle	2	0	3	0
Scarlet Run..... $\frac{1}{2}$ sieve	4	0	0	0	Mustd. & Cress, punnet	0	2	0	0
Beet, Red..... doz.	2	0	3	0	Onions..... per doz. behs.	5	0	0	0
Broccoli..... bundle	2	0	3	0	Parsley..... per sieve	3	0	4	0
Brns. Sprouts $\frac{1}{2}$ sieve	0	0	0	0	Parsnips..... doz.	0	9	1	0
Cabbage..... doz.	1	0	1	6	Peas..... per quart	0	6	1	0
Capsicums..... 100	2	0	3	0	Potatoes..... bushel	4	0	6	0
Carrots..... bunch	0	6	0	8	Kidney..... do.	5	0	6	0
Cauliflower..... doz.	3	0	6	0	Radishes doz. bunches	0	9	1	0
Celery..... bundle	1	0	2	0	Rhubarb..... bundle	0	4	0	0
Cucumbers..... each	0	4	0	8	Savays..... doz.	0	0	0	0
pickling..... doz.	2	0	0	0	Sea-kale..... basket	0	0	0	0
Endive..... doz.	2	0	0	0	Shallots..... lb.	0	8	0	9
Fennel..... bunch	0	3	0	0	Spinach..... bushel	2	0	3	0
Garlic..... lb.	0	8	1	0	Tomatoes..... per doz.	2	0	3	0
Herbs..... bunch	0	3	0	0	Turnips..... bunch	0	6	0	0
Horseradish..... bundle	2	6	4	0	Vegetable Marrows ..	0	0	0	0

TRADE CATALOGUE RECEIVED.

W. Rollisson & Sons, Tooting, Surrey, S.—*Catalogue of Stove, Greenhouse, and Hardy Ferns.*

TO CORRESPONDENTS.

“We request that no one will write privately to the departmental writers of the “Journal of Horticulture, Cottage Gardener, and Country Gentleman.” By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

Address (J. Currie).—Mr. Rivers, Sawbridgeworth, Herts.

Books (W. P. M.).—“The Vine Manual,” you can have it free by post from our office if you enclose thirty-two postage stamps with your address.

Insects on PEAR LEAVES (W. Dingle).—They are “Slimy grubs,” the larvae of the Pear saw-fly, *Selandria aethiops*. Dusting the grubs with slacked quicklime destroys them.

GARDENER VISITING PARIS (*Ignoramus*).—Visit Versailles, Jardin de la Muette, Jardin des Plantes, Baron Rothschild's at Bois de Boulogne, Thibaut & Keteleer's nurseries, Luxembourg Gardens, Jamin and Durand's at Bourg-la-Reine.

WILL'S BRONZE ZONAL PELARGONIUMS (*Ipomoea*).—“Some of my Bronze and Gold Pelargoniums may be seen at Mr. Bull's Nursery, King's Road, Chelsea. They will probably be exhibited in good condition at South Kensington on the 17th of September next.”—J. WILLS.

DAHLIA TUBES (W. H. M.).—The wooden tubes may be obtained of Mr. Putnam, Turner, Eton; but any turner could make them. They must, of course, fit into the metal tubes, and rise $1\frac{1}{2}$ inch above the board. As the stalks differ in size, the holes for these are made rather larger than the stalk, which is kept in its place by a small wooden peg.

RED KIDNEY BEAN (E. S.).—The “Roths Bohnen,” about which you inquire, is very probably the Haricot Suisse rouge of the French. Any London seedsman would doubtless supply it.

SELECTION OF VINES (*Ten-year Subscriber, Nottingham*).—You cannot do better than keep places for Mrs. Pince's Black Muscat and Standish's Royal Ascot, both first-rate Grapes. Then you may have Salomon's Frontignan, Trentham Black, and Black Alicante. These are in addition to these you have already—namely, Muscat of Alexandria, Muscat Hamburgh, Bowood Muscat, Golden Hamburgh, Black Hamburgh, Lady Downie's, and Muscadine.

MEALY BUGS ON GRAPES NEARLY RIPE (*One who is in Trouble*).—We are very sorry, indeed, that we know of no means of destroying the bugs thoroughly now without injuring the Grapes. When the Grapes were younger they might have been washed with tobacco and other water, and then have been well syringed; but any such treatment now will greatly injure the appearance of the bunches. We would advise dislodging the bug by small, clean, soft brushes, and then destroying it of course—resorting, in fact, to such temporary relief as will allow the bunches to be presentable. When the fruit is cut and the leaves are becoming yellow we would move every green thing out of the house, and smoke it several nights in succession with sulphur, burned slowly in a pan with a lot of litter, moss, or grass over it, to increase the density of the smoke and prevent the smoke becoming too hot. Of course every opening in the house should be closed up. A few days afterwards we would syringe the whole of the woodwork, Vines, walls, shelves, &c., with soft-soap water at about 180°, then clean and wash in the usual way; and in addition to all this, it would be well to paint all joints and joinings with turpentine. After all such sulphur fumes and washing we have found mealy bugs in clusters where neither smoke nor washing had reached them, in joints and cranvies. All the surface soil, also, should be removed from the house. There is no enemy more difficult to subdue than the mealy bug, and it produces successive generations with great rapidity. We have no doubt these insects are often transferred by our clothing from place to place. If once they attack the roots of plants there is no means of exterminating them, except by removing all the earth from the roots and thoroughly washing them.

EXTENT OF PIPING A BOILER HEATS (*Boilers*).—We do not think a 36-inch-long saddle-back boiler will heat efficiently more than from 600 to 700 feet of four-inch piping. We are supposing that the height and width will be about 24 inches. You will want a boiler nearly double the length to heat the 2000 feet, but better have two. Thomson's retort is a good boiler, used to be made by Meiklejohn, of Dalkeith, and, like the saddle-back, requires less sinking than the upright tubular ones; Monro's cannon boiler is a modification of the retort. All boilers do better when sunk considerably below the level of the piping. As you cannot sink you will wisely use those that require the least sinking, and we have seen the retorts only a little below the pipes.

MELONS SPOTTING (J. B., near Dublin).—There are two causes for your Melon leaves being spotted and shrivelled up. They have evidently suffered a little from the sun striking them before air was given in the morning, and whilst they were damp from condensed moisture. The leaves being damp would have been of less consequence if the air had not been confined. We could not find an insect, but we have no doubt that you have myriads of thrips—a little insect that will jump as you approach it. All such leaves as those sent should be instantly removed and burnt. All those at all fresh should be washed with weak tobacco water, weak soft-soap water, or, perhaps better still, smoked with tobacco when dry, and syringed next morning. This treatment continued may enable you to ripen a crop if the bulk of the leaves are green. If the most of them are as bad as those sent, then we advise pulling the plants all out and clearing the place. All the remedies will be labour throw away, for you will not have a good Melon. To clean the place, shut up closely and burn a pound of sulphur in it, covering it over with grass or moss. Then remove the soil, whitewash, and next season not only attend to early air-giving, but smoke whenever you see a trace of the thrips, which we consider worse than the red spider. It is just possible that your plants suffer from the red spider too.

FRUIT GROWING (*Fruit-Grower*).—We think your opinion erroneous. There are numerous works on fruit-growing, and the cultivation of fruits for market does not differ from that required for fruits for private consumption. Quantity rather than high quality is aimed at by the market fruit-grower, because he knows that the mass of buyers require cheap fruits. You can have “Fruit Gardening for the Many,” free by post from our office, if you enclose five postage stamps with your address; and if its instructions are followed good fruit will be obtained, provided soil, climate, and attention are suitable.

FRUIT TREES ON A CLAY SOIL IN IRELAND (W. H. H.).—The first thing to be done is to have the ground thoroughly drained 3 feet deep, then trench it over two spits deep. Plant your trees, which we presume will be either dwarf bushes or pyramids, 6 feet apart, and let the sorts be of Apples—Kerry Pippin, Cox's Orange Pippin, Ross Nonpareil, and Mannington's Pearmain. Of Plums—Early Rivers, July Green Gage, Huling's Superb, Purple Gage, and Woolston Black.

VAPOR FROM HOT-WATER PIPES (C. S.).—We should not like to sprinkle the hot-water pipes in your vineyard with guano water if the pipes were above 140°, and the guano water should not be stronger than 2 ozs. to the gallon. We prefer the pipes never to be higher than 160° when we have plenty of piping. We would rather avoid sprinkling the pipes with manure water if we could.

UNNAILING PEACH AND NECTARINE TREE BRANCHES (*A. Ellimore*).—The branches should not be unnailed, as the wood will ripen much better against the wall than away from it. Keep them neatly trained to it, and do not let the shoots be too close together. Your trees will require all the warmth you can give them to ripen the wood, and unnauling them will have just the contrary effect.

WHITE SUBSTANCE IN SOIL (W. H. B.).—It is difficult to say what is the “white granulated substance like small rice” in the soil in your flower-pots. Being peculiar to that composed of peat, we think it may be fragments of white quartz or sand, which are very common in some peats; it may also be some fungus arising from the decay of woody fibre; but in this case the small rice-like lumps will not be granulated but soft. Without a specimen we are unable to say what the white substance is, or whether it will be injurious to plants; if quartz or sand it is very beneficial.

PLANTING STRAWBERRIES (*An Old Subscriber, Dublin*).—We think it would be advisable to take a crop of Potatoes, Kidney Beans, &c., of your sloping bed where Strawberries have usually failed. If that is not suitable, then we would trench down the oldest part as deeply as possible, so as to secure the best soil for the top, and to that top we would add decayed stable manure before fresh planting. To make sure of quick returns we would plant in rows a foot apart, and a foot between the plants in the rows, and after the first season we would remove every other row. You seem to have hit on the best kinds for bearing, and we would advise you to plant those that have done best, as Strawberry plants are not to be depended on; the kinds that will do first-rate in one place will sometimes fail in another. Keens' Seedling, British Queen, Sir Harry, Sir Charles Napier, Wonderful, Dr. Hogg, &c., are all fine kinds and good bearers.

COMPACT LOBELIA PLANTS (*C. W.*).—Seedling Lobelias are not generally so compact as plants from cuttings. The most compact and rich blue we have seen for a long time was a pan of *Lobelia erinus spectabilis* at the Show at Bury. It is much the same as we grew and sent about years ago as *L. erinus compacta*. We think it was in Mr. Grieve's collection of bedding plants.

VIOLA CORNUTA.—"I have the two so-called varieties of the above now growing at Osberton—viz., Purple Queen, which has been here some few years, and Mauve Queen, sent me last autumn by the kindness of Mr. Wills. Of the former I have several thousands, of the latter a few hundreds; both are doing equally well with me. As I feel interested alike with Mr. Wills in the opinion of your correspondents, I will not mar the discussion at present respecting the merits of the two varieties, but invite your correspondents to visit Osberton and prove for themselves the comparative value of the two. Here a chain of Beaton's Variegated Noddy Pelargonium and *Viola cornuta* is to be seen, equal to any combination of colours to be met with in the country. I have also a quantity of *Viola lutea*, which I will speak of on a future occasion.—EDWARD BENNETT, Osberton Hall, Worksop."

PLUM AND APRICOT TREES INFESTED WITH APHIS (*Julia*).—You may overcome the aphids by syringing the trees with diluted tobacco water, made by adding six gallons of water to every gallon of tobacco water as obtained from the tobaccoist. Wet the leaves and every part thoroughly; this should be done in the evening of a calm day, and in the morning syringe the trees with a solution of 2 ozs. of soft soap to a gallon of water. Syringe with the soap solution and pure water on alternate nights for a week. To keep down attacks of aphides syringe strongly on their first appearance with the soap solution already named, wetting the foliage thoroughly.

GRAPES SPOTTED (*M. C.*).—The Grapes were spotted from the moisture in the atmosphere being condensed on the berries, and the sun shining powerfully on the drops causes the skin to rupture. The evil might be prevented by allowing more foliage over the fruit, and by giving air early, so that the berries may be dry before the sun shines upon them.

STEPHANOTIS FRUIT (*Idem*).—The fruit will be ripe in two or three months (we are not able to say exactly how long, according to the temperature, and the colour will change to a peculiar yellowish hue. The fruit is as large as an egg.

DEVONIENSIS ROSE NOT FLOWERING IN CONSERVATORY (*E. J.*).—Your Rose cannot be expected to flower the first year, as it has grown so well. You will do well to leave it alone, and train it down the other side of the arch. It will produce side shoots next year, and no doubt abundance of fine flowers.

WHITE JASMINE FLOWERLESS (*A Constant Reader*).—The white Jasmine flowers very freely if care be taken to thin out the old useless wood and to train in fresh in its place, the foreright and irregular growths being cut in rather closely, so as to admit light and air to the wood on which depends the flowering of the following year. As your plant is old, a top-dressing of equal parts of turfy loam, leaf mould, and rotten manure will tend to invigorate it. A top-dressing, 3 inches thick, should be given in autumn, removing at the same time some of the old surface soil.

APRICOT AND PLUM TREES BLIGHTED (*A Varley Gardener*).—Choose a calm evening, and syringe the trees forcibly with 2 ozs. of soft soap to a gallon of water, and repeat the syringing every other night for a week, and then give a few good syringings with clear water.

LIQUID MANURE (*Idem*).—Liquid manure if given in excessive quantities will kill the roots, and eventually the trees to which it is applied; sooner or later, according to the description of plant or tree, and the strength or weakness of the liquid.

BEDDING APRICOT STOCKS (*Idem*).—Now is a good time to bud Apricots, it being performed when the sap runs freely, which is during moist weather. In budding, care should be taken to insert wood and not bloom buds.

CUCUMBERS (*Idem*).—Cucumbers can be grown very fairly in a frame, pit, or house during the summer months; but it is preferable to plant in soil over a slight bottom heat, or plunge the pots, if grown in that way, in a mild hotbed. Cucumbers are very frequently grown with no bottom heat, beyond a little at the commencement.

PLANTING CANNA INDICA OUT OF DOORS (*John Deans*).—Canna plants may be planted out of doors in June in good, rich, sandy soil, and remain in the open ground until the beginning of October. They are best planted in a sheltered situation, as in one which is exposed their foliage is very liable to be damaged by wind. The leaf sent us appears to have been taken from the *Salisburia adiantifolia*, a hardy deciduous tree; but we must have flowers as well as the leaf to be certain of the name of a plant.

LIST OF SUPERIOR ROSES (*Idem*).—*Hybrid Perpetuals*: André Leroy, Alfred de Rougemont, Anna du Diesbach, Baronne Pelletan de Kinkelin, Beauty of Waltham, Caroline de Sansal, Charles Lefebvre, Comte de Nanteuil, Duc de Cazes, Duc de Rohan, François Lacharme, Grant des Batailles, Général Jacqueminot, Gloire de Santeny, John Roper, Duchesse de Morny, Le Rhone, Leopold I., Lord Macaulay, Louise Maguin, Madame Boutin, Madame Victor Verdier, Maréchal Vaillant, Paul Desgraud, Pierre Netting, Prince Camille de Rohan, Prince Léon, Seigneur Vaise, Vainqueur de Goliath, Virginal, and William Griffiths. *Of Bourbons*—say Acaïdie, Baronne Gunella, Emotion, Paul Joseph, Rev. H. Dombain, Souvenir de la Malmaison, and Modèle de Perfection. *China*: Cels multiflora, Madame Brion, Mrs. Hosangue, and Napoleon, along with Archduke Charles. *Tea-scented*: Adam, Devonienais, Gloire

de Dijon, Lays, Madame Willermoz, Maréchal Niel, Nina, Souvenir d'un Ami, and Vicomtesse de Cazes. *French*: Adèle Prévost, Céleste Partail, Ohi, Duchesse de Euclench, William Tell, and Coupe d'Honneur. *Hybrid China*: Blairli, Paul Ricaut, Comtesse Lacépède, Chénédole, and Charles Duval. *Provence*: Cabbage, Crested or Fringed Moss, De Neaux, Reine de Provence, and Unlquo. *Moss*: Baron de Wassenar, Comtesse Martinis, Common, Laurel, Reine Blanche, Marie de Blois, and White Bath. The colours may be known from the catalogues.

CLOTH OF GOLD AND SARRANO ROSES (*Idem*).—Their being budded on the Briar will not cause the flower to have a large centre. More liberal treatment and a warmer situation would make good the defect. Water freely, and mulch with half-rotten manure.

PEACH AND NECTARINE TREES AGAINST A WOODEN FENCE (*E. F.*).—From the fact that the harder fruits do well upon your close-boarded wooden fence, but not the Peaches and Nectarines, we see nothing but a confirmation of our opinion (see July 11th, page 33), in your experience, which is the same as our own. The aspect may be good, but the heat is not so effectually retained by a wooden wall as by a brick one, hence the wood of the trees does not mature, and the fruit ripens very badly. The wooden fence would, no doubt, answer admirably for Peaches and Nectarines if you were to cover it with glass, and thus make an orchard-house of it.

DIVIDING DAVALLIA CANARIENSIS (*E. W.*).—You may divide this Fern now, being careful to preserve some portion of soil as well as root to each division, and after potting keep it close, shaded, and moist until established. You may tint rockwork for a Fern case white by dipping the rock in lime water, and stone colour by making a thin size of Roman cement, and soaking the rockwork in it. This Journal is published every Thursday morning.

MANETTI STOCK versus BRIAR STOCK (*Ignoramus*).—The Manetti is a vigorous-growing kind of Rose now much in repute as a stock for grafting and budding the finer sorts of Roses on. For your soil we would grow them on the Briar, as the Briar does very well on cold clays. The Manetti will also thrive. Thiopson's "Gardener's Assistant" is published by Blackie & Sons, and the price is 3s. 6d.

PIEWEA CULTURE (*H. M.*).—The Piewea can be grown well in a compost of turfy sandy peat two-thirds, and one-third sandy turfy loam, with the addition of enough charcoal about the size of a pea and silver sand to amount to one-fourth of the whole. The peat and loam should be chopped and made pretty fine, and the whole well mixed and incorporated. The plants should have a cool airy frame or pit during the summer, and in winter a light airy situation in a greenhouse, from which frost is merely excluded. They should be cut back after flowering, and when the young shoots are a few inches long the plants should be carefully potted, removing the greater part of the old soil, but preserving the roots, and in potting providing good drainage, and keeping the neck or collar of the plant slightly raised in the centre of the pot. After potting keep the plants rather close and shaded for a few days, afterwards give them plenty of air and keep them near the glass; then water when necessary, but do not give excessive quantities at any time, and yet sufficient at every watering to show itself at the drainage. Careful watering is needed in winter, and plenty of air.

SELECT STRAWBERRIES, GOOSEBERRIES, CURRANTS, AND RASPBERRIES (*John J. Ord*).—As you required but a few sorts, the following will suit:—*Strawberries*: Eclipse, Keens' Seedling, La Constante, Dr. Hogg, John Powell, and Sir Joseph Paxton. *Gooseberries*: Crown Bob, Red Warrington or Aston, Green Walnut, and Pitman's Green Gage. *Currants*: Black Naples, White Grape, and Lang-bunched Red. *Raspberries*: Fastolf, Prince of Wales, and Red Antwerp.

SOWING CINERARIA SEED (*C. E. S.*).—It is now late to sow Cineraria seed for spring bloom, but a good time to sow for a late bloom. The seed should be sown in pans drained to half their depth with broken pots, and then filled to the rim with a compost of sandy loam and leaf mould, adding sand liberally. The surface should be patted and made level with the bottom of a flower-pot, and the seed sown rather thinly. Cover with fine soil, and place under a hand-glass in a shady place, keeping the soil moist. When the plants are up remove them to a cold frame, and when large enough to handle, pot them off singly into small pots, and keep moist and shaded until established.

WINTERING PELARGONIUMS IN A CELLAR (*E. S.*).—Old plants of these, taken up before frost, and having all the leaves stripped off, may be kept in a cellar in dry sand. It is presumed that frost is excluded from the cellar.

DARK ROSE FOR PEGGING DOWN (*New Forest*).—Hybrid Perpetual, Maréchal Souhet (Guillot).

LASTEIA RIGIDA AND DILATATA (*Idem*).—*L. rigida* has fronds "narrowly triangular and bipinnate, with narrow tapering pinnae, and oblong blunt pinnules, which are cut into broad rounded segments, again notched into a varying number of pointed but spinulose teeth." If you will apply this to *L. dilatata*, you will find the difference in the general appearance, and botanically it differs materially in other respects. Both are deciduous, and though *L. dilatata* will thrive in almost any soil, *L. rigida* is exclusively found at a considerable elevation on the limestone ranges of Lancashire, Westmoreland, and Yorkshire.

ACHIMENES FOLIAGE BROWNED (*A Beginner*).—In all probability the leaves are browned through some destructive agent on them, but whether it be from thrips, from the composition with which the Vines were dressed at the winter pruning, or from the sun striking powerfully upon the leaves whilst wet, we are not able to tell, having no data to form an opinion by, and there being so many causes that may produce the appearances which the leaves you sent present.

NAMES OF PLANTS (*P. I. Neston*).—*Clematis Jackmanni*. (*Constant Reader, Sydenham*).—*Rhamnus frangula*, or Alder Buckthorn. (*Mrs. Taylor, Perth*).—One of the varieties of *Tacetis patula*, or French Marigold. (*T. H. D.*).—1, Rhyn cotinus, or Venetian Sumach; 2, *Isoplexis gracilis*; 3, *Scelaginella dentulata*. (*Felias*).—*Primula sinensis*. (*An Old Subscriber*).—It is *Anacharis alismastrum*. The only way to destroy promptly this widely-spreading aquatic plant would, undoubtedly, destroy all the fish in the pond, and therefore is not advisable. The best thing seems to be to let the plant die out when it chooses. Three summers since the lake in Kew Gardens was filled with this plant; last summer it was entirely lost there, another plant having taken its place, while the present season there is developed in equal abundance some *Convolvulus plant*; so that there being precedents, next season may witness an entire absence of this plant from your grounds.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending July 30th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 24	29.739	29.640	71	43	64	61	S.	.00	Very fine throughout.
Thurs. 25	29.842	29.695	75	52	63	60	S.E.	1.48	Very fine; cloudy and fine; rain.
Fri. . 26	29.860	29.575	58	47	64	60	N.E.	.40	Constant heavy rain; boisterous, with rain
Sat. . 27	30.047	29.924	64	41	61	59	W.	.02	Cloudy and cold; densely clouded; very fine.
Sun. . 28	30.061	29.130	71	40	61	59	N.E.	.00	Fine, with low white clouds; fine; very fine at night.
Mon. . 29	30.064	30.000	65	38	61	59	N.	.00	Hazy clouds; fine throughout.
Tues. . 30	30.027	29.989	72	44	61	59	N.	.00	Fine; rather cloudy; very fine at night.
Mean	29.948	29.708	68.60	43.57	62.14	59.57	..	1.90	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

GAME FOWL BREEDING THIS SEASON.

I WENT to see a friend the other day who breeds a considerable number of Game fowls every season, and his treatment is so different from that adopted by the generality of breeders, that I think it necessary to give the readers of "our Journal" a few particulars as to his method of rearing the young broods.

When the chickens are from three to four days old, they are placed with the hen under a stationary coop 3 feet square, without a bottom, closed on three sides, having a sloping roof, and latticed in front, with 3 inches intervals.

Coops of this description are ranged along the edge of a small stream of water, on a large grass run, and instead of being placed in the highest and driest position, are set at the base of an incline, and where the ground is most liable to become saturated with moisture. The land being naturally damp, I noticed that the soil inside the coops was trodden until it was a complete puddle, from their being kept stationary. I was informed that the hens and chickens remained in the coops night and day without any other protection, until the chickens were large enough to leave the old birds, and that they then fly to the trees which surround the ground, and continue there until colder weather approaches.

During some of the heavy rains which we have had, the coops were completely flooded, several of the chickens being carried away by the current, but these were afterwards recovered. Notwithstanding this, all the broods appeared both lively and healthy; indeed, I did not observe a diseased bird. The fowls are fed upon meal, dough, and corn, and although well and carefully bred have no extraordinary care bestowed upon them. My friend tried a few in the kitchen garden, as recommended by "NOTTINGHAMSHIRE," but they did not answer.

Another friend of mine informs me that last season he suffered very seriously from the same complaint as that which I recently described, and although he has this season used the same ground for breeding purposes, he has not had a single case.

The following particulars I have copied from the *Melbourne Age*:—"A sort of epidemic has been very prevalent among fowls up the country (Australia), which is very sudden in its effects, several cases of sudden seizure and death being reported from Sandhurst, Majorca, &c. A gentleman, who had five of the finest and fattest of his lot dead within as many days, says that he attributes their death to being choked with the wind from flying ants, which since the late rains have been swarming in myriads over all the ground, and are eaten greedily by the fowls. On opening the gizzard of one of them, it was found to be quite filled with the ants, the wings of which were sticking in the gullet in great quantity. An old cocker also informs me that numbers of adult birds are dying without apparent cause in different parts of Yorkshire."

I thank "NOTTINGHAMSHIRE" for his kind remarks, and, as he justly observes, I sincerely wish other breeders, both fortunate and unfortunate, would give us the result of their experience this season. The pages of this Journal are at all times open to receive communications, and we ought not to be backward in advancing the interests of our hobbies.

Could any of the numerous readers of the Journal inform me whether there is any specific for roup in fowls? A friend of mine has tried many medicines for this purpose, but without

any happy result. A gentleman informed me the other day that a small piece of blue vitriol rolled in brown soap is a sure cure.*—YORKSHIRE.

NOTES ON FANCY PIGEONS.—No. 8.

MY OWN CONNECTION AND EXPERIENCE WITH FANCY PIGEONS.

HAVING now reviewed all the English writers on fancy Pigeons—re-writers I need not notice—I will venture on a chapter of autobiography, a style of writing now somewhat in fashion, so I hope the reader will pardon my for once adopting it.

I was a very little boy, when, having in my possession a much-studied juvenile volume containing a history of fancy Pigeons, a digest of old Girtton's work, but with illustrations far superior, my imagination was often taxed as to what the real birds could be like—for in the pictures some seemed to have hoods, others very long beaks, others, again, very short ones; some had blown-out breasts, and others very extensive tails. Well, I wondered and wondered how the living birds looked, when to my surprise and delight my wonder was fully satisfied. It happened thus: I was born in a country town; therefore, living in a street, neighbours' gardens were only separated by walls, and the roofs of buildings in one garden were visible from another. One morning my eye was attracted to an out-building of our next neighbour, for its roof was covered with Pigeons resembling the pictures in my book. Our neighbour was a tradesman in a large way of business, and made periodical visits to London by coach. He was a well-to-do man, and indulged his tastes as they rose—now growing wondrous Cucumbers, then Ranunculuses (how well I remember his long bed with an awning, under which were the eye-dazzling and lovely flowers!) While in London he had been smitten with Pigeon-fancying; he was also a great poultry man, specially attached to Black Polish. Thus smitten, he had brought back several hampers full of good Pigeons, for he was regardless of expense when his fancy was concerned, and as a stay-at-home man he delighted in pets. Here, then, were almost all the then-known varieties of fancy Pigeons. As yet Germany had not sent us her "Toys." On this morning our neighbour had let his birds out for the first time, and there they were bowing, cooing, strutting, pouting, or simply preening and sunning themselves on the long thatched roof of his stables, the south side of which he had covered for the birds' convenience with hurdles, whose broad and wide-apart bars made them good perches. What a sight this was to a bird-loving boy! Here were, feathered and alive, true fancy Pigeons. Soon I learned the names of each variety by comparing them with my book. Many visitors came to our neighbour to see his wonderful Pigeons, for such had hitherto been unknown in that far-away fen town. The result was, his example was speedily followed, and a perfect Pigeon furor set in. Coachloads of birds were brought from London by other tradesmen, or the young ones were bought as soon as ready, and in different parts of the town were fitted up many Pigeon-lofts. Old Girtton was bought and studied, and several persons became adepts in the fancy; pairing, exchanging, selling their birds, not satisfied until they obtained still better stock.

This was in the year 1837, and during that and the five following years, while the furor generally lasted, I never knew so many valuable birds kept in one small town. That sight on that morning made me in heart a Pigeon fancier. How I longed to possess some, but how was it to be managed? To

* Blue vitriol is sulphate of copper. It should be given in powder in one-grain doses, as recommended in our "Poultry Book." It is a poison, and if given in a lump is apt to be injurious, if not fatal.—EDS.

keep Pigeons flying with a neighbour's stock one hundred strong, and only 10 yards distant, was clearly impossible; but when a boy sets his heart upon anything difficulties soon vanish. We happened to have an unused building tolerably large and high, having no ceiling, and, best of all, with two sides of latticework, so it was light and airy. But how get the consent of the one boys call, I fear irreverently, "Governor." I dreaded a talk, for I might be cut short by one severe reply, so I wrote a note, an early effort of penmanship, I sealed it—by-the-way, in so doing I scorched the paper—and then I laid my note with a trembling hand on my father's desk, where he would be sure to see and read it just after he had dined; for I knew even then that "a hungry man was an angry man," but the same man is a good easy soul when toasting his toes comfortably after a good dinner. Anxiously I watched through a glass door the opening of that note and the reading it, for stay in the room I dared not, but I saw it caused a smile, and took that as a good omen, although, of course, the paternal pocket and corn-bin would of necessity have to be drawn upon. My stratagem succeeded, and after a little banter about my scorching the letter, I had a hearty ally in the one to whom I addressed it, and who then and after saved his boy from much sin by allowing him to fill the garden of the old house at home (bless its old roof-tree and the venerable one whom it yet covers), with many pets—Dantams, Hawks, Plovers, Rabbits, and at length Pigeons.

Like most beginners, I went year by year through the gradations of common birds, half-bred birds, less good fancy Pigeons, and in my third year I rose to the possession of excellent fancy Pigeons.

So I began. I kept each pair shut up at night in hutch arranged one above another, in which they also bred. Soon each learnt its home, was readily caught, and by being handled became tame. The hutchers were barred with iron, and so secured from vermin intrusion. During the day the Pigeons flew about the building and came out to a latticed box on the sunny side, in which they loved to strut and look out to the expanse of garden. On an evening when there was a party of young folks, I was accustomed to bring in choice specimens, which were fondled and made much of. Then there were visits to the lofts of other fanciers, and giving or receiving hints. I liked to choose a bright morning in winter for a round of such visits; then the birds' plumage is in good trim, and themselves lively, and then the Tumblers tumble to perfection. Fanciers differed, some were stupid and bought bad birds at large prices, some were excellent for one variety, most were good-natured and readily allowed a boy to see their birds as often as he liked, and felt a pleasure in giving pleasure. But there was one cross old curmudgeon (he had the best birds nevertheless), who had to be wheeled and managed before his loft-door was to be unlocked; but at length he mounted a short ladder, threw back the door, and revealed the treasures within, revealed them to "my ravished eyes." He possessed the best Carriers, Black ones; and Pouters also Black, and the only Almond Tumblers, for he was a high-class fancier, except that love of eating being his failing, he kept huge Spanish Runts, and boasted how few it took to make a usual-sized pie.

Years rolled on, and I had to leave home to be trained for the University, at a cathedral grammar school. How I missed my pets need not be told, nor the long letters of inquiry that I wrote about them. Then came college days, and no Pigeons could be allowed within academic walls, though dogs, cats, and even bees were allowed. College days over, I lived for four years in Scotland, just south of the Grampians, in an old house formerly a place of strength and pretension, and finding an old tower suitable, I resumed the fancy. Miles I rode after a certain strain of Tumblers, right from Forfarshire into Kincardine. Then the Provost of the town near me was an ardent fancier, and being a Baltic merchant imported Pigeons from Russia. A worthy Scotch carpenter was another ally of mine, and to him I gave my birds when I left Scotland. Then, again, in Sussex I had my pets, and now for years in Wilts, I have tended them with undiminished regard.

Thus I have been connected with the fancy for thirty years, and my experience, bought dearly at first by many mistakes, has been considerable.—WILTSHIRE RECTOR.

DRIFFIELD POULTRY SHOW.

It is somewhat surprising that though poultry exhibitions are now so general, most of those which have been long established can boast of even a greater number of entries than ever. Such was the case at

Driffeld, and as the day, though at times threatening, proved fine, the number of visitors was very large. Most of the fowls, as might be expected, were in very bad condition, but the *Gams* were, on the contrary, excellent. Strange to say, the *Homburgs* were not equal to what they should have been—in fact, it appears that Yorkshire is beginning to lose its prestige for these beautiful varieties. The *Turkeys* and *Geese* were unusually good.

The pens employed at Driffeld are of a very primitive character, being, in fact, nothing but brown open-work wicker baskets, of the shape of a bee hive, and have evidently seen much service. The arrangements for the *Pigeons* and *Rabbits* were unusually exacting, for exhibitors of both were obliged by the rules to find their own baskets, consequently a more irregular appearance than those divisions presented could scarcely be imagined. A few specimens had excellent show-pens, whilst many, both of *Rabbits* and *Pigeons*, were so cramped up, that even to move at all was an utter impossibility; and all were alike in the open, entirely unprotected from the weather. A thoroughly wet day, had it occurred, must have done incalculable damage to many of the more tender breeds. Now that the Driffeld Show is so well supported, it would be advisable for the Committee to procure some folding exhibition pens, which, independently of doing good service at their own meetings, would very speedily realise the full outlay if lent on hire. We drop this friendly hint, as in poultry shows, like all other things, progress is expected.

DONKINGS.—First, F. Key, Baverley. Second, W. Charter, Driffeld. Highly Commended, Mrs. Dale, Scarborough. *Chickens*.—Prize, D. White, Driffeld. Highly Commended, F. Key, Cock. —Prize, G. Holmes.

SPANISH.—First, G. Holmes. Second, O. A. Young. Cock. —Prize, M. Robinson, Cottingham.

GAME (Black-breasted and other Reds).—First and Second, W. Boyes, Beverley. Commended, J. W. Pickering, Col-Dale, Pocklington. Cock. —W. Laycup, Driffeld.

GAME (Duckwing and other Greys).—First and Second, W. Boyes, Cock. —Prize, J. Laycup.

GAME (Any other variety).—First, Messrs. Tate & Holmes, Driffeld. Second, J. Laycock. Cock. —Prize, G. Holmes. *Chickens*.—Prize, W. Boyes. Highly Commended, R. Wood, Withholme, Lockington.

COCHIN-CHINA.—First, T. H. Barker, Hovingham, York. Second, O. A. Young. *Chickens*.—Prize, R. Loft, Woodmansey. Highly Commended, T. H. Barker. Cock. —Prize, T. H. Barker.

POLANDS.—Prize, O. A. Young. Cock. —Prize, O. A. Young. **HAMBURG** (Golden-spangled).—First, T. Holmes, Driffeld. Second, G. Holmes. Commended, J. Blanchard, Driffeld. Cock. —Prize, O. A. Young. Commended, J. Blanchard.

HAMBURG (Silver-spangled).—First, G. Holmes. Second, G. R. Young. Cock. —Prize, J. A. Blanchard.

HAMBURG (Golden-pencilled).—First, G. Holmes. Second, W. Charter, Driffeld. Cock. —Prize, T. Holmes.

HAMBURG (Silver-pencilled).—First, H. Holmes. Second, T. Holmes. Cock. —Prize, H. Holmes.

HAMBURG (Any other variety).—Prize, H. Holmes. Commended, R. Mosey, Malton.

ANY OTHER PURE AND DISTINCT BREED NOT PREVIOUSLY CLASSED.—First, B. Loft (Sultan). Second, G. R. Young (Brahma Pouter). Cock. —Prize, B. Loft.

FARMYARD CROSS.—First, R. Loft. Second, G. Robinson, North Frodingham. Cock. —Prize, W. Wales, North Frodingham.

DANTAMS (Black and White).—First, R. Jessop, Hull (Black). Second, Mrs. Dale (White). Cock. —Prize, J. R. Jessop.

DANTAMS.—First, G. Holmes. Second, J. A. Blanchard, Driffeld. Cock. —Prize, T. Holmes.

EXTRA POULTRY.—Extra Prize, W. G. Purdon, Driffeld (Spanish Chickens).

GESE.—First and Second, Mrs. O. A. Young, Driffeld. *Goosings*.—Prize, Mrs. O. A. Young.

TURKEYS.—First, Mrs. H. Merkin, Driffeld. Second, Mrs. T. Dawson, Pondsforth, Driffeld. Highly Commended, Mrs. Dale. *Poults*.—Prize, Mrs. Jordan, Eastburn.

GUINEA FOWLS.—Prize, O. A. Young. Highly Commended, H. Merkin, Driffeld.

DUCKS (Aylesbury).—First, M. Harrison. Second, O. A. Young. *Ducklings*.—Prize, M. Harrison.

DUCKS (Rouen).—Second and Commended, Mrs. Jordan. *Ducklings*.—Prize, W. Piercy, Driffeld.

DUCKS (Any other variety).—First, J. R. Jessop. Second, W. & T. Holby, Rotsen. *Ducklings*.—Prize, Mrs. Jordan.

PICCONS.—*Croppers*.—Prize, F. Key, Carriers. —Prize, R. Bellamy, Leven, Beverley. *Trumpeters*.—Prize, G. H. Stephenson, Beverley.

Jacobins.—Prize, R. Bellamy. Commended, F. Key. *Fantails*.—Prize, S. Ellington, Woodmansey, Beverley. Highly Commended, W. Gifford, Driffeld; J. W. Topham, Bainton; J. Train, West Lutton. *Tumblers*.—

First and Extra, F. Key. Highly Commended, G. H. Pickering, Driffeld. Commended, A. Waites, Driffeld. *Barbs*.—Prize, E. Waites. Highly Commended, J. Blanchard, Nuns. —Prize, C. N. Lythe, Cottingham.

Extra Prize, B. Leason, Driffeld. *Any other variety*.—Prize, J. Marshall, Driffeld (Turbits). Highly Commended, A. Leason, Driffeld (Owls). Commended, R. Loft.

RABBITS (Any breed).—First and Second, A. H. Easton, Hull (Fawns, Grey, and White). Highly Commended, T. Duffill, Beverley; J. W. Topham, Bainton. Extra Prize, A. H. Easton.

The Judges were Edward Hewitt, Esq., of Sparkbrook, near Birmingham; and John Ord Jolly, Esq., of Green Hammerton, York.

STOCKTON-ON-TEES POULTRY SHOW.

THE Poultry Show in connection with the Durham County Agricultural Society was held at Stockton-on-Tees on Wednesday, July 24th. The prizes offered were upon a somewhat liberal scale, but the entries were not so numerous as might have been expected.

For the *Spanish* class the entire county of Durham did not furnish a single pen; indeed, there were only two entries, and both of them were from Yorkshire. The cock in the pen which obtained the first prize had a puffy face, invisible eyes, and a falling comb—a combination of qualities which breeders of Spanish do not deem very desirable. In *Dorkings* there was more competition, and the birds were of a much better quality. In Class 5, *Brahma Pootras*, there was only one pen. The cock was certainly a good bird, but a rigid adherence to the canons laid down in the "Standard of Excellence" would have compelled the Judges to disqualify the pen, for the cock was pen-combed and the hens were single-combed. Mr. H. Lacy's name was in the list of entries, but from some reason which was not given his birds did not appear. He, however, exhibited a *Brahma cockerel* and two pullets of very great merit. The *Cochin-Chinas* were very good, and the *Game* class was very well represented. *Hamburghs*, it would seem, are not in much favour with the gentlemen who arranged the schedule of prizes, as they only apportioned one prize to that breed, including in one class Gold or Silver-pencilled or Spangled fowls. There were eight entries, and the prize was won by a capital pen of Golden-pencilled birds belonging to Mr. Wood, of Halifax.

The *Ducks* and ducklings shown by Mr. Leech, of Rochdale, were excellent, and carried off four first prizes. The *Geese* and goslings were also good.

In *Pigeons* Mr. H. Yardley, of Birmingham, won all the prizes, with the exception of one for *Jacobins*, which was won by Mr. W. Bulmer, jun., of Stockton.

SPANISH.—First, G. H. Ventress, Danby, Yarm. Second, Rev. F. Hail Dyke, Accomb, York.

DORKINGS.—First, J. White, Warlaby, Northallerton. Second, G. Sewell, Bishop Middleham, Ferryhill. *Chickens.*—First, J. White. Second, J. Bell, Thornton-le-Moor, Northallerton.

BRAHMA POOTRAS.—Prize, Rev. A. D. Shafto, Branceth Rectory. *Chickens.*—Prize, H. Lacy, Hebden Bridge.

COCHIN-CHINA.—Prize, Rev. A. D. Shafto. *Chickens.*—First, R. Benson, Darlington. Second, G. H. Procter, Durham.

GAME.—Prize, W. Bearpark, Northallerton. *Chickens.*—First, G. B. Bell, Caldwell, Darlington. Second, W. Bearpark.

HAMBURGHS (Gold or Silver-pencilled, or spangled).—Prize, W. Wood, Sheffield. *Chickens.*—First, W. Smith, Northallerton. Second, O. A. Young, Driffield, Yorkshire.

BANTAMS.—First, G. & H. Ventress. Second, J. Wilson, Tudhoe, Durham.

DUCKS (Aylesbury).—Prize, E. Leech, Rochdale. *Ducklings.*—First, E. Leech. Second, G. Robinson, Sessy, Thirst.

DUCKS (Rouen).—Prize, E. Leech. *Ducklings.*—First, E. Leech. Second, W. Bearpark.

GESE.—Prize, J. Sherwood, Hilton, Yarm. *Goslings.*—First, J. Carlton, Hilton, Yarm. Second, O. A. Young.

EXTRA STOCK.—Highly Commended, R. Hawkins, Old Sesham, Sunderland (Malays); G. H. Ventress (White-crested Black Polish).

TURKEY.—Prize, C. Trotter, Stockton.

PIGEONS.—*Carriers.*—Prize, H. Yardley, Market Hall, Birmingham. *Almond Tumblers.*—Prize, H. Yardley. *Tumblers* (Any other variety).—Prize, H. Yardley. *Fantails.*—Prize, H. Yardley. *Barbs.*—Prize, H. Yardley. Commended, H. Cawood, Thorne. *Jacobins.*—Prize, W. Bulmer, jun., Yarm Lane, Stockton-on-Tees. Commended, H. Yardley; H. W. Thomas. *Turbits.*—Prize, H. Yardley. Commended, W. H. Thomas. *Pouters.*—Prize, H. Yardley. Commended, H. W. Thomas.

RABBITS (Any breed).—Prize, H. Cawood (Himalayas).

The Judges were Mr. J. Shorthose, Newcastle, and Mr. R. Pearson, Durham.

HASLINGDEN POULTRY SHOW.

THE third annual Exhibition of the Haslingden Agricultural Society took place July 25th. The day was fine, and the Show was attended by upwards of eight thousand visitors. The entries of Poultry and Pigeons were numerous, and some fine birds were penned.

The following prizes were awarded:—

COCHIN-CHINA (Buff or Cinnamon).—First, C. W. Brierley, Middleton (Buff). Second, T. Bott, Woodlands, near Bury (Buff). Highly Commended and Commended, W. A. Taylor, Manchester (Buff). *Chickens.*—First, A. Bamford, Tonge, Middleton (Buff). Second, W. A. Taylor, Manchester (Buff). Highly Commended, T. Bott, Woodlands, near Bury (Buff).

COCHIN-CHINA (Any other variety).—First, T. Stretch, Ormskirk (Partridge). Second, T. Bott (Partridge).—Highly Commended, J. Bury, Eccles (Partridge); C. W. Brierley. *Chickens.*—Prize, J. H. Schofield, Whitworth, near Rochdale.

BRAHMA POOTRAS (Any colour).—First, W. Hargreaves, Bacup. Second, H. Lacy, Hebden Bridge. *Chickens.*—First, H. Lacy. Second, B. Carlisle, Bishopton. Highly Commended, G. H. Wheeler.

DORKINGS (Any colour).—First, J. Robinson, Garstang. Second, H. Beldon, Bingley. Highly Commended, C. W. Brierley, Middleton; D. Parsons, Cudon, near Preston. Commended, T. Rogers, St. Helens. *Chickens.*—First, W. A. Taylor, Manchester. Second, T. Pomfret, Houghton Lane. Highly Commended, J. Stott, Healey, near Rochdale.

SPANISH (Any colour).—First, H. Beldon. Second, Messrs. Burch & Boulter, Sheffield. Highly Commended, J. Thresh, Bradford; Messrs. Burch & Boulter. *Chickens.*—First, H. Beldon. Second, J. Clewos, Walsall. Highly Commended and Commended, Messrs. Burch & Boulter.

GAME.—Special Prize, Rev. W. J. Mellor, Colwick Rectory, Nottingham. First and Second, C. W. Brierley, Middleton. Highly Commended, J. Holland, Manchester. *Chickens.*—First, J. Firth, Lily Lane Mills. Second, W. Whewell, Irwell Bank, Radcliffe. Highly Commended, E. H. Woodcock, Thornhill, Wigan.

HAMBURGHS (Golden-pencilled).—First, T. Wrigley, jun., Tonge, Middleton. Second, S. Smith, Northowram, Halifax. Highly Commended, H. Beldon. *Chickens.*—First, W. Parr, Patricroft. Second, S. Smith. Highly Commended, H. Beldon.

HAMBURGHS (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, Early. Highly Commended, G. P. Barnes, Stockport. *Chickens.*—First and Second, H. Pickles. Highly Commended, H. Beldon.

HAMBURGHS (Golden-spangled).—First, N. Marlor, Denton, near Manchester. Second, J. Fielding, Newchurch. Highly Commended, J. Roe, Hatfield; S. & R. Ashton, Mottram, Cheshire; H. Beldon. *Chickens.*—First, S. & R. Ashton. Second, J. Roe. Highly Commended, N. Marlor.

HAMBURGHS (Silver-spangled).—First, H. Pickles. Second, J. Fielding, Newchurch. *Chickens.*—First, J. Fielding. Second, J. Turner, Radcliffe. Highly Commended, J. Fielding. Commended, H. Pickles.

ANY OTHER VARIETY.—First, H. Beldon (Polands). Second, Col. Stuart Wortley, Grove End Road, London (French). Highly Commended, Col. Stuart Wortley (French); J. Clegg jun., High Crompton, near Oldham (Black Hamburg). Commended, D. C. Parsons, Cudon (Cuckoo Dorkings).

ANY VARIETY.—First, J. Marchant, Halifax (Black Spanish). Second, Messrs. Burch & Boulter.

GAME BANTAMS.—First, G. Birtwistle, Making Gate. Second, C. W. Brierley.

BANTAMS (Any other variety).—First, N. Marlor. Second, T. C. Harrison. Highly Commended, Messrs. S. & R. Ashton; T. Burgess, Brighouse, Yorkshire. Commended, J. W. Morris, Rochdale (Black).

TURKEYS.—First, T. Houlker, Revidge, near Blackburn. Second, E. Leech. Highly Commended, E. Leech.

GESE.—First, T. Houlker. Second, E. Leech. Highly Commended, S. E. Stott, Rochdale.

DUCKS (Aylesbury).—First, E. Leech. Second, J. Robinson.

DUCKS (Rouen).—First and Second, E. Leech. Highly Commended, T. Houlker.

DUCKS (Any other variety).—First, T. C. Harrison. Second, G. Furness, Accrington (East Indians). Highly Commended, C. W. Brierley; D. Parsons (Grey Call).

SINGLE COCKS.

GAME COCK (Any colour).—First and Second, C. W. Brierley. Commended, J. Jackson, Bury (Black Red).

GAME COCK (Within four miles of Haslingden).—First, G. Furness. Second, F. M. Hindle, Haslingden. Highly Commended, C. Haworth.

GAME BANTAM COCK.—First, G. R. Davies, Knutsford. Second, W. & H. Bockley, Accrington. Highly Commended, G. Birtwistle; J. Holland, Manchester.

PIGEONS.

CARRIERS.—First, J. Hawley, Bingley. Second, W. Hargreaves, Bacup. **TUMBLERS.**—First, J. Corbridge, Blackburn. Second, J. Hawley. Highly Commended, J. Hawley; H. Yardley, Birmingham.

BARBS.—First, J. Bromley, Tong Moor, near Bolton. Second, W. Hargreaves. Highly Commended, L. Glassy, Rochdale.

OWLS.—First, A. & B. D. Laycock, Keighley. Second, H. Yardley, Birmingham.

CROPPERS.—First, J. Hawley. Second, E. E. M. Roods, Rochdale.

FANTAILS.—First, H. Yardley. Second, J. Hawley. Highly Commended, H. Yardley; J. Thompson, Bingley.

TURBITS.—First and Second, J. Thompson. Highly Commended, A. Dove, York.

DRAGONS.—First, J. Thompson. Second, D. Bromilow. Highly Commended, H. Yardley.

TRUMPETERS.—First and Second, J. Hawley.

ANTWERPS.—First, J. Hawley. Second, J. Thompson.

ANY OTHER VARIETY.—Prize, J. Thompson. Highly Commended, T. Kenyon, Accrington (Nuns).

The Judges were Mr. Richard Teebay, Fallwood near Preston, and Mr. R. Sergenson, Liverpool.

RAISING LIGURIAN QUEENS—MASSACRE OF DRONES.

I HAD a fine early swarm of pure Ligurians given me, and I am anxious to raise queens for all my hives of black bees, seven in number, without weakening the Ligurians, which are very strong. The Ligurians are in a Woodbury hive, and the black bees are in Grecian hives.

Should I take the queen from the Ligurian hive, which has plenty of drones, and place her in one of the other hives previously deprived of its black queen, leaving the Ligurians to raise royal cells, and, being thus deprived, save the drones and ensure the young queen's pure impregnation? The greater portion of the black drones will be killed previously to the hatching of the young queens.

I shall be much obliged for information as to the best way to proceed, so as not in any way to endanger the life of my pure queen, and as to the manner in which the royal cells raised, if more than two, are to be treated. May they be inserted in the combs of the other hives at once, or will the bees destroy them in their anxiety?

Killing of drones has been going on for some days, and in two hives the entrances had become so jammed up that it was found necessary to clear the entrance with a hook, the bees being in the most excited state, which subsided on this being effected.—J. M. H.

[Do not on any account risk the life of the Italian queen by attempting to transfer her to any of your other stocks. The best mode of proceeding was detailed by Mr. Woodbury in page 271 of our last volume. After raising a sufficient number of young queens in "nuclei," as therein described, you may if

you please attempt their substitution for your black queens, but this must not be done until they have commenced egg-laying, and it will be well as a *dernier ressort* to confine the black queens in small boxes with about a hundred workers, and a piece of sealed honeycomb to each, until either success or failure has been ascertained. You will learn also from Mr. Woodbury's article what to do with any superfluous royal cells.]

CONSEQUENCES OF SELLING FOUL BROOD.

In the early part of this month (July), I was mortified to find foul brood in the second Ligurian stock sent me by Messrs. Neighbour, under the circumstances related in No. 322, as well as in several nuclei. This being a return of the pest, I intend as early as possible to rid my apiary of this terrible malady, and therefore wish to ask two or three questions, which may interest other readers of "our Journal" as well as myself.

1st, Is it absolutely necessary to put the Woodbury hive-covers through the same process as recommended for the stock hives, or is simply a coat or two of paint sufficient?

2nd, Can a queen taken from an infected colony be given in the course of the same day to a healthy colony without any danger of the disease going with her?

3rd, Have swarms that have come off from diseased stocks ever been known to be infected from that source, supposing they kept clear of the disease from other ways?—J. B., *Bracken Hill*.

[1, We consider it unnecessary to do anything to the roofs or outside cases, the infection being confined to the hives and their contents.

2, Dzierzon seems to be of opinion that the queen of a diseased stock may be introduced into a healthy colony with impunity; and this opinion is confirmed by our own experience. It is, however, but right to state that some German writers demur to this conclusion, and assert that infection may be conveyed by the queen from one hive to another.

3, We believe that swarms from infected stocks would generally, if not invariably, take the disease with them; but as we have had no direct experience on this point, we should be glad of the opinions of such of our correspondents as have had better opportunities of judging.

When, during the summer of 1863, Mr. Woodbury's apiary was devastated by foul brood, he immediately published in our columns the full particulars of his disaster, writing at the same time to all who had that season received bees from him, in order to put them on their guard, and offering them every compensation in his power, whilst he resolutely refused to part with another stock until he had succeeded in restoring his entire apiary to perfect health. We commend this example to the attention of Messrs. Neighbour & Sons. They have already done incalculable mischief by disseminating this terrible disease during three successive seasons.]

UNITING SWARMS.

I SHALL be much obliged to be told where I was wrong in the following unsuccessful attempt to unite three hives of bees. I was the more disappointed as I had previously succeeded in a similar enterprise.

To begin, then, I had at the commencement of this July a box containing a small flight of bees in my apiary, which I desired to strengthen by marriage, as it is called. This I call A. On Monday, July 8th, a swarm which I call B, issued from an old stock which we will distinguish as D. Swarm B was exceedingly large, which may be accounted for by the lateness of its appearance. My plan was this: to fumigate D and B, and anite them to A.

I first operated on D, the very old stock. In four or five minutes the fumes of fungus pulverulentus (called in Suffolk Bull Fice), applied as they stood, stupified the few bees which remained behind the swarm. The hive was turned up, the little honey preserved, and the stupified bees, liberally drenched with sugared ale, were swept into a pail.

The swarm B was next operated on. Ten, fifteen, twenty, thirty minutes elapsed before they showed the least signs of giving in. I therefore gave leave to use tobacco instead of the fungus. Although the straw hive was covered up with a wet cloth to keep in the fumes, it was, I am sure, three-quarters of an hour before they finally succumbed. When they were

"down," they were in like manner drenched with about a pint of sugared ale, and added to the D bees already in the pail.

Lastly, we attacked A, a light flight of this year. In this instance also we experienced the greatest difficulty—although it was a 14-inch-thick box and made air-tight—in stupifying the bees. At last they were "down," and were added with a plentiful supply of ale to the others.

There was now an enormous heap of bees before us, and the problem was to discover the best way of coaxing them all up to the capacious box A, which was very partially filled. I took an oblong frame, standing on four legs, a sort of frame-stool, which was exactly the width of the square box A, and tied a large cloth between it, so that the folds of the cloth fell down in the middle; into this extemporised bag I emptied the bees and set the box A, with comb in, above, and then tied the skirts of the cloth around the box. I then protected the bag from the cold and went to bed. Next morning, Tuesday, to my dismay, but somehow not to my surprise, I found my bag of bees nearly as large as before. Few if any of them had gone up, for I could see through the windows in the box. They seemed, in fact, overcome with smoke or the liquor.

I gave them up for lost, and was vexed enough: but as I could only fail, I determined to try one other plan. I washed them. My servant brought some lukewarm water in a milk-pail, and slipping it under the bag washed it carefully by the help of a new whitening brush. This evidently revived some of them. So when the tubbing was over, we dropped the sunny side of the cloth containing the bees, and with feathers spread them in the warm sun. This they enjoyed, and several of them, completely tamed by adversity, took kindly to everything and crept up into the still tenantless combs of the box, which I had left where it was. That Tuesday evening I replaced the remnant of a light box with the counterbalancing weight of a heavy heart. Out of that enormous heap of bees I am afraid not more than one-quarter survived; but, strange to say, the box is now strong and prosperous.

I spared no pains nor time to succeed, and having failed, I shall be truly obliged to be corrected, that I may do better another time.—W. H. S.

[The fungus-smoke which you employed was evidently not strong enough, whilst the fumes of tobacco were, as we have found them in our novitiate, so powerful as to prevent the bees from recovering. This mode of uniting stocks should now, however, be considered a thing of the past, and together with chloroform, deserves to be ranked in pretty nearly the same category as the brimstone-pit. Had you driven the inhabitants of the three stocks one after the other into a capacious empty hive and then inducted them into A, by knocking the cluster out on a cloth, and placing the hive over it, raised on a couple of sticks to avoid crushing the bees, you would have had no further trouble, and little if any loss of life would have ensued.]

THIS YEAR'S HONEY-HARVEST.

SOME of your correspondents have sent you most gloomy accounts of their bees. Undoubtedly the year has been very unfavourable to honey-gathering. I fed my bees liberally late into the spring, and they are all very strong. I have had four swarms and two flights, and till this recent St. Swithen's weather they were rapidly cleaning off the honey-dews, and are now industriously working; but I have taken no caps off. I never saw them looking more strong and healthy. I shall, however, think myself fortunate if my ten stocks get enough to carry them through the winter.—W. H. S., *Yarley, Suffolk*.

A QUASI-QUEEN.

ABOUT a fortnight ago I removed a Ligurian queen, which had commenced egg-laying, from her parent hive (a nucleus box), in order to place her at the head of a strong black stock. Somewhat to my astonishment her subjects manifested little or no uneasiness at her loss, nor did they take any steps to supply her place, sealing over all the young worker brood which they possessed without attempting to found royal cells. Looking over the combs to-day (July 25th), I discovered a worker, surrounded by a circle of bees, giving herself all the airs and receiving all the homage due to a legitimate monarch. This pretender to royalty really showed a considerable resemblance in shape to a perfect queen, and that she was so regarded by

the other workers was evidenced by the confusion which ensued upon her removal. It occurred to me that she might perhaps be fertile, but I could not discover that she had deposited any eggs; it is, nevertheless, possible that she might have done so had her life been longer spared by—A DEVONSHIRE BEE-KEEPER.

HONEY HARVEST—GALE'S HIVE.

HAVING noticed several letters in your paper lately, complaining of the honey harvest this season, I think a few particulars from this neighbourhood may interest some of your readers.

My stock is only small, being two of Gale's hives. Gale is a carpenter in this town (Alton), who is very much interested in bees, and he has made these hives, which are certainly the most convenient I every saw, so far as ability to take honey goes. Should you wish, no doubt he would send an account of them, for the benefit of your readers.

From my two stocks of bees in Gale's hives, I took on

	lbs.		lbs.
June 13th.....	2½	July 2nd.....	3½
" 22nd.....	3½	" 12th.....	4
" 24th.....	3	" 17th.....	4
" 29th.....	3½	" 18th.....	7½
July 1st.....	7½	" 24th.....	9½

Total 48½ lbs. up to the present time (July 27th), and I expect to take nearly as much more, some of the drawers being now half full. Each drawer weighs from 3 lbs. to 4 lbs. when full, and is very easily taken out of the hive.—PHILIP CROWLEY.

BEEES NEAR BIRMINGHAM.

I RECEIVED an artificial Ligurian swarm from Mr. Woodbury, July 3rd, and emptied the bees out of their travelling box on to the bottom of the bars of an inverted bar hive. I had previously taken a bar of brood, and a little honey as well, out of two of my black stocks, and put them in the hive; then I turned this up, and as soon as the bees collected in the hive, put it on the floor-board, and placed them on their stand. They have (as I consider) done very well, for they have filled all the bars but one of a ten-bar hive with combs, the cells of which are now filled with brood. I have some young Ligurians, as I saw when I opened the hive to-day (July 23rd). They have gained 9 lbs. in twenty days. Is this not good for a new hive? Now, as this variety does so well, it seems a great pity that they cannot be kept pure, but that the black drones are likely to mate with the young queens. Is there not some way to prevent this?

I had a black stock in a Neighbour's hive, which I have written to you about before, as being very lazy. The other day I wanted a swarm to send to a friend, so I took off the super, which had been on some time, and the bees, as I thought, were working in it; but it, like the hive, seemed full of bees only. I then knocked them out and found but little comb, and less honey, for the time it had been on. I next put the hive over a cloth, and beat a lot of bees out till I had the queen. As soon as I had her out I put her in an empty hive to collect the bees, and placed it on the stand. In doing all this a piece of comb came out, which I gave my friends, the Ligurians, the benefit of. I thought by this time I had enough bees for a swarm, so I packed and sent them away. This was done July 5th.

Next day I weighed the hive, which made 8 lbs. for the bees and honey, and on the morning of the 22nd I did so again, and they had gained 3 lbs. In the middle of the same day I thought as this hive had done so badly, I would transfer the inmates into a bar hive, for I like to look at them often, and I did so, knocked all the bees out, and having found the queen, collected them in an empty hive, and put them on the old stand. I then removed the old hive to take the combs out, which I fixed with strings and pieces of wood into the bars. I next put the bees into it, and set it in the old place, and all is quiet to-day (July 23rd), and they have fixed the combs, so that I have been able to remove the supports. There seems to be a large number of drones. Should you suppose that the old queen was mostly a drone breeder? How many eggs can a queen lay in a day? and is there any difference between a drone and a worker egg?

My other hives have done well lately. No. 1, a bar hive, has made 13 lbs.; No. 2, ditto, 13 lbs.; and a Neighbour's hive, 7 lbs., in seventeen days. I had all these hives last winter.

Why do bees begin so many royal cells? When is the best time to take bars of honey away? Is it best to cut out royal

cells when you find them beginning, and do not want the bees to swarm?—J. G.

[When drones are in excess, the probability is that it arises from an excess of drone-comb, which should be removed, and worker-comb substituted. A good queen can lay 1500 to 2000 eggs a-day, or possibly even more. Von Siebold's investigations demonstrated the fact, that the worker eggs are fecundated, whilst drone eggs are unfecundated. The instinct which leads bees to found a plurality of royal cells seems a wise provision against the possibility of failure. The excision of queen cells can, at any rate, do no harm, under the circumstances you mention. Bars of honey may be removed at any time when they can be spared. The best means of preserving the purity of Ligurians were detailed by Mr. Woodbury, in page 271 of our last volume.]

A NEGRO DISCUSSION ABOUT EGGS.—In the fairest village of Western New York, the "cullud pussens," in emulation of their white brethren, formed a debating society for the purpose of improving their minds by the discussion of instructive and entertaining topics. The deliberations of the society were presided over by a venerable darkey, who performed the duties with the utmost dignity peculiar to his colour. The subject for discussion on the occasion of which we write was, "Which am de mudder of the chicken—de hen wot lay de egg, or de hen wot hatches de chick?" The question was warmly debated, and many reasons pro and con. were urged and combated by the excited disputants. Those in favour of the latter proposition were evidently in the majority, and the President made no attempt to conceal that his sympathies were with the dominant party. At length an intelligent darkey arose from the minority side, and begged leave to state a proposition to this effect: "Spouse," said he, "dat you set one dozen Duck's eggs under a hen, and dey hatch, which am de mudder, de Duck or de hen?" This was a poser, was well put, and nonplussed the other side, even staggering the President, who plainly saw the force of the argument but had committed himself too far to yield without a struggle; so, after cogitating and scratching his wool a few minutes, a bright idea struck him. Rising from his chair in all the pride of conscious superiority, he announced: "Ducks am not before de house; chickens am de question; defore I rule de Ducks out!" and do it he did, to the complete overthrow of his opponents.

OUR LETTER BOX.

CHOICE OF FRENCH FOWLS (*Rev. T. P.*).—We believe we have, and have had, more experience in the French breeds than most people. We have no hesitation in saying we consider the Houdans the best for general purposes. Their laying qualities are of a high order, and they are as hardy as fowls can be. Their only drawback in our eyes is that they do not sit. This necessitates keeping two breeds.

ULCERS IN FRENCH FOWLS (*T. E. P.*).—It is proved beyond contradiction that the cocks of La Flèche fowls are subject to diseases unknown to our English breeds, and that are not common to the hens. The same may be said of the Crève Coeurs. A cock of either breed will be hearty Monday evening, Tuesday morning he will be choking with ulcerous matter, Thursday he will be nearly well again, and within a week he will be dead of positive wasting—not an ounce of flesh left on his bones. We have never found but one treatment to be useful. It is to allow them no water in their pens, but to give them drink three times per day; when ill to withhold it altogether. This latter system has cured the only cases we have been able to treat successfully. We had a walk of La Flèche at an isolated farm-house. Within two days of a heavy shower they were always sick from drinking from puddles. These birds, we believe, delight in filthy water, and prefer it to a running stream, or to that fresh from a spring.

EGG SHELL IN CHICKENS' FOOD (*E. S.*).—We should think all such contrivances as pounded egg-shells bad for young chickens. When only four or five days old they require soft food that is easy of digestion. Your feeding was evidently wrong from the glutinous adhesion of their excrement. In rearing chickens artificially you have to supply the heat of the hen, and as nearly as possible to give food such as she would find and call them to. She would not do this for egg-shells. We believe she knows that which we fancy, that the poor little ones could not digest them.

FRENCH PLUMS.—*Live and Learn* wishes to be informed how to preserve plums in the mode adopted for those called French plums and sold in jars. He thinks his Victoria plums would do for the purpose. Any of our readers will oblige us by sending us information on the subject.

STOCK THAT HAS NOT SWARMED (*Carolus*).—Are you sure that the stock has not swarmed unperceived? We should not now expect a swarm to issue, although if one should rise its probable preservation over the approaching winter is only a question of autumnal feeding and a few shillings' worth of lump sugar. We know of no means by which you can accelerate swarming, nor should we expect the bees to take to a bell-glass so late in the season.

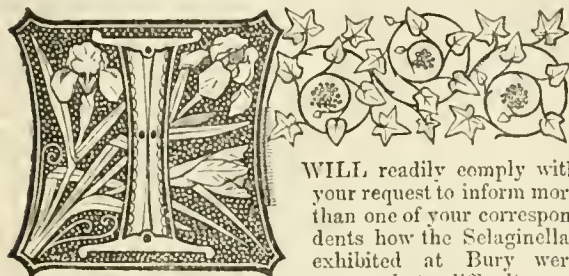
EGYPTIAN BEES (*J. M. H.*).—Write to T. W. Woodbury, Esq., Mount Radford, Exeter.

WEEKLY CALENDAR.

Day of Month	Day of Week	AUGUST 8—14, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.	
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.				
8	Th	Meldrum Horticultural Show.	74.7	49.4	62.1	16	35	af 4	36	af 7	11	af 2	40	af 11	8	5	27	220
9	F		74.5	49.9	62.2	15	37	4	31	7	10	8	morn.	9	5	19	221	
10	S	Royal Horticultural Society, Promenade.	75.2	52.3	63.7	18	38	4	32	7	5	4	17	0	10	5	11	222
11	SUN	8 SUNDAY AFTER TRINITY.	75.8	50.6	63.2	18	40	4	30	7	5	4	59	0	11	5	2	223
12	M		75.1	50.1	62.8	15	42	4	28	7	57	5	47	1	12	4	53	224
13	Tu	Tewkesbury Horticultural Show.	74.7	50.0	62.4	18	43	4	26	7	15	6	41	2	13	4	42	225
14	W	Ellon Horticultural Show.	72.6	50.6	61.6	16	45	4	20	7	48	6	39	3	14	4	51	226

From observations taken near London during the last forty years, the average day temperature of the week is 71.6°; and its night temperature 50.4°. The greatest heat was 93°, on the 10th, 1842; and the lowest cold 83°, on the 11th, 1864. The greatest fall of rain was 1.14 inch.

CULTURE OF PYRAMIDAL SELAGINELLAS.



WILL readily comply with your request to inform more than one of your correspondents how the Selaginellas exhibited at Bury were grown; but a difficulty presents itself at the outset.

One correspondent inquires about *cæsia*, but it may be this or *cæsia arborea* that is meant. Now the habits of these two, and therefore the modes of culture, are widely different: hence, to make quite sure of giving the desired information, I will describe the mode of producing both of these, and the other Selaginellas, as shown.

And first, as to *cæsia arborea*, the grandest of them all. Begin with a strong healthy plant, and pot it in a mixture of rough peat and charcoal, with at least 2 inches of drainage: plunge it in a bottom heat of 80°, and grow it in an atmosphere genial and vaporous—nearly saturated with moisture, and at a temperature of from 70° to 80°. Shade it carefully from any sunbeam. Light, which imparts colour to other plants, robs this of that rich blue tinge which constitutes one of the chief elements of its beauty. Under these conditions the plant will grow with the strength of a giant and the erectness of a tree, which in fact it is among Lycopods. It roots prodigiously both in the pot and along the stem, collecting food alike from earth and air, and converting it into leaves at a magical rate. Vigorous as it is, its rapidly elongating stem will soon become topheavy, and demand support.

At this point of the plant's career the vital question of ultimate size and desired form must be settled once for all. Is it to be a dwarf or a giant? 2, 3, 4, 5, 6, or 10 feet high? and of what form—flat, round, weeping, or pyramidal? I have tried various heights and nearly all forms, and pronounce now in favour of a pyramid of from 6 to 8 feet high. This point settled, place the plant in a 12-inch pot in the same material, and under the same conditions as before, being careful to sink it low down in the pot, say 3 inches from its surface. This will leave space for two or three top-dressings, as the plants root rapidly upwards.

Now for the basis of the pyramid. There are two modes of forming it—one by the aid of a wire trellis of the desired shape, another by means of a young Larch or Spruce tree. I showed examples of both at Bury, and hardly know which is the better. Whichever is used, the first condition of success is to fix it immovably on or in the pot without injury to the roots. This is done by placing a strong wire beneath the rim of the pot, and fixing the trellis or tree firmly as a rock to this wire. If not fixed strongly and tightly, as the plant becomes topheavy the basis of the pyramid will swerve, some of the branches must break,

and the fine pyramid of green become a wreck through lack of solidity of base.

In training secure plenty of bottom at starting, regulate the growth once a-week, prevent all entanglement of shoots, as no plant is more impatient of unravelment, keep all the leaves on the external surface of the trellis with the right sides outermost, and the plant will express its gratitude by putting on a robe of such exquisite blue shot silk over its green as no other plant can wear, excepting always, however, its lowly but equally lovely sister *cæsia*.

During the growth of the plants, with sufficient drainage it is scarcely possible to over-water them; and they drink not only with their roots but with their entire surface: hence the necessity of converting both earth and air into a large drinking-fountain during their thirsty—that is, during their rapid-growing period. In winter they demand repose by being kept drier in a temperature not under 65°, and if they are treated to a summer regimen in November, the chances are that the moisture so essential to their summer's beauty, would bring upon them the rottenness of a winter's death from which there is no resurrection.

So much for *cæsia arborea*. Now for the lovely *cæsia* herself. Well, she is a creeping dwarf, like many more of her relatives. This suggests to us the mode of culture. There are only two ways of appreciating the beauty of dwarfs. We must either stoop down to them, or raise them up to us. The first is inconvenient and not very effective, the second is both effective and pleasant. We see them better, and enjoy their excellencies in comfort. But dwarfs are not only short but often stout. Placed close to us they become lumpy from their squabbishness. This has long been the case with many of our Selaginellas. Of the dwarfest stature, they have been spread over such a large flat surface until the flatness has robbed them of much of their interest, and seemed to mar by its shadow their exquisite beauty: hence my desire to raise them into pyramids or any other desired form, so that the outline of the mass may harmonise with the loveliness of their structure and the beauty of their verdure.

For this purpose all that is needed is an iron trellis of the desired shape, wired over pretty closely, say every 2 inches, and firmly, very firmly, attached to the pot. Fill the pot within an inch of the brim with charcoal, then with a layer of rough peat up to the level. Now a layer of Selaginella *cæsia* or any other sort, again a layer of peat, and another layer of plants, until the top is reached. The chief points in filling up are consolidation, and keeping the centre filled with charcoal alone for drainage. It also requires to be done neatly and cleanly, and when finished the whole should be washed over again and again with clean water issuing from a coarse rose. This watering is performed for two reasons: one is to soak the whole mass, the other, equally important, is to wash off at once all the loose soil. The usual waterings must be applied gently through a fine rose. Nothing seems to worry the plants more than the debris of soil falling down upon them every time they are watered: hence the necessity that the first washing should be thorough, and the future waterings

gentle and careful; they must, however, be frequent. Plants on the side of a steep hill soon dry up and wither, and drought is the great enemy of *Selaginellas*. A careful dust with the syringe may often take the place of the watering-pot. From the position of the plants it is obvious that their water-want is not largeness, but frequency of supply. They may require sprinkling four times a-day, or thorough soaking through the mass once a-week; much will depend upon the atmosphere. Moisture in this is of more vital moment for these than for the large sorts; in fact, perfect success is impossible without it. They may be said to rest upon the peat, and feed upon the air. Their tiny roots before they can grasp the former must perforce collect food from the latter. Unless they find it they wither and perish: hence the necessity of providing them with suitable pabulum through the medium of a moist atmosphere.

But although all this heat and moisture are essential to their perfect growth, they may be preserved in beauty for many months under widely different conditions. The kinds under consideration require, perhaps, more heat to preserve them in beauty than any other sorts. In a low temperature or a dry atmosphere they are apt to lose that glaucous hue which is one of their chief charms. Still they retain much of their beauty for some time in a sheltered corner of a conservatory; and many kinds, such as *Danielsii*, *atroviridis*, and *stolonifera*, retain their beauty for months in conservatories. The latter, in fact, is hardy, and will stand anywhere, and it is one of the best for pyramidal growth.

The chief point to be attended to in bringing such plants from a tropical to a temperate clime, from the forcing-house or stove to the conservatory, is to make the transition gradual. Let them pass through the intermediate stages of vineries, Peach-houses, &c., and allow some time—a month, perhaps—on the journey. In this way the plants will not feel the change; and when they finally arrive in a cool temperature the entire treatment must be modified. The object is no longer the production or extension, but simply the preservation and exhibition of perfect life. The stimulating regimen must, therefore, give place to one of great watchfulness, restful care, and delightful enjoyment. The anxieties of the producer will be exchanged for the pleasure of possession, and few plants can confer more than pyramidal *Selaginellas* grown in the manner that I have attempted to describe.—D. T. FISH, F.R.H.S.

APRICOT CULTURE.

(Continued from page 75.)

As regards training, no better mode can be adopted than fan-training, as vacancies occasioned by the dying off of the branches can be filled up, which is not the case when horizontal training is practised. A maiden plant should be headed down to within 9 inches of the ground during mild weather in February, or early in autumn, but not later than November. In consequence of this cutting-down shoots will be developed from the buds below the cut. Three of the best for vigour and position are to be retained, and the others should have the points taken off at the second or third leaf, at the next leaf at every stopping throughout the season, and in October they are to be cut back to within an inch of their base. The three shoots retained without stopping are to receive every encouragement, the central one being trained upright, and the side ones to the right and left of it. In nailing them (and it should be done loosely to allow for the growth of the branches), the weakest should be trained more erect than its more vigorous neighbour; but if both are equally strong, then they should be trained at an angle of 45°, bringing them down to a horizontal position about the end of September. To encourage the side branches or shoots the leader or central shoot may, if as strong as the side shoots, be stopped in the last week in May, or first week in June, or when it has grown 9 inches, at which height it may be stopped. This will encourage the side shoots, which cannot be too strong.

Shoots will result from stopping the central shoot. These may be stopped at the third leaf, for if a quantity of foliage be left on the central shoot, it will, if so inclined, outstrip the side shoots in thickness, and this it must not be allowed to do. The stopping of the leader in June will, in most cases, be sufficient to give equal or greater vigour to the side shoots, and in that case stopping the laterals need not be resorted to. The side shoots resulting from the stopping may in that case be trained in, one on each side of the leader, it being presumed that three shoots have resulted from the stopping, as in the

case of the heading of the maiden plant, and there will consequently be a leader and two side branches, the result of the summer heading, and two strong side shoots, the result of the heading back of the maiden plant. No knife should be used upon these branches in autumn, except the leader, which should be cut back to 9 inches above the divergence of the uppermost side shoot. The central shoot not having been stopped, should be shortened to 9 inches, by a clean cut with a sharp knife, and the side shoots reduced two-thirds their length, for it will not do to head back the leader at the winter pruning, and not the side shoots, for cutting back the shoots in winter is very different in its results from stopping them in summer. The first causes an increase of growth, the latter a lessening of the vigour of the tree, or that part denuded of foliage; the sap thereby diverted into other channels must necessarily be weaker than were the foliage permitted to increase, and the sap be expended or concentrated upon one shoot or branch.

The side shoots (or branches, as we must now term them), having made a good growth in the first year, or that of their origin, will in the second push a number of strong shoots, and the leader will no doubt be likewise pushing strong shoots. The side branches should not be allowed to extend by more than two branches each, and one of these should spring from the extremity of the branch and be trained in as a continuation of the branch from which it takes its rise; and the second shoot should originate at from 12 to 15 inches from the junction of the branch on which it is situated and the stem, and it should be trained out straight along the side of the branch. All other shoots should have their points taken out at the third leaf, and be kept closely pinched in to one leaf throughout the season, except that a shoot is to be left at every 12 inches and laid in alongside the principal branch. Any strong foreright shoots should be entirely removed, as they only tend to keep the sun and air from the other shoots. This much for the side shoots or branches in the second year. The leader is to have the shoots it gives rise to reduced to three—one as a leader, and two as side shoots; and the side shoots are to be trained at such an angle that when 3 feet in length there will be 15 inches between them and the lowest branch, and the leader is to be treated in a similar manner to the leader of the preceding season.

In autumn the strong shoots may be reduced one-third their length, and the weak two-thirds. The branches should be trained so that there may be 15 inches distance between them at their greatest divergence, and they should all diverge equally from the stem or branch from which they take their rise, and when they extend so as to be 15 inches apart each branch should be forked by training in another shoot, and be trained alongside it until it has extended so as to be 15 inches distant from the branch next below it, when it should be again subdivided; and this is not to be the case with one branch in particular, but should prevail with all. The principal branches will therefore be evenly disposed, with sufficient space between them for the training-in of young wood. The leader will, in the course of the third or fourth year, have its office rendered unnecessary by the side branches being produced at an angle that will necessitate their being trained at a less distance than 15 inches, and it is then to be trained and subdivided the same as a side branch.

As the Apricot produces its fruit upon spurs and on the wood of the preceding year, and the spurs are plentiful on the wood of two or three years' growth, shoots ought to be trained in between all the principal branches, but not too thickly, 12 inches being a good distance to leave them upon the principal branches. These shoots should be trained in rather close to the branch from which they take their rise, and if the growth of the shoot exceeds 12 inches it may be shortened to that length, but if less, it is well to leave it with its point entire, unless it is very weak, when it should be cut in closely, and a shoot be originated near the base, which will in most cases prove sufficiently vigorous. These shoots may bear in the year following their production; but if not, room should be left, by training them rather close to the principal branch, for encouraging a shoot from its base. This is to supersede that of the preceding year should it produce fruit, and if this be the case the oldest, or that which has borne fruit, should be cut out in autumn, and the other trained in its place; but the shoot first produced not bearing, and having formed a number of fruit-buds or spurs, both it and the shoot of the current year ought to remain, and no successional shoot will in the following season be required. When fruit is produced the oldest of

the shoots should be cut away in autumn, and the youngest trained in its place. It will be necessary to train-in a young shoot from its base in the succeeding year, and that producing fruit is to be cut away, and the young shoot trained in its place, or both may be left another year, in which case no successional shoot will need to be originated until the season succeeding the removal of the old one.

We have by this system branches several years old, and shoots originating from them at 12 inches apart, and laid in between them. These shoots are to be shortened at the winter pruning to 12 inches, more if weak, less if strong, and in the second summer from the base of each a shoot is to be laid-in and trained alongside, and the shoot two years old, having produced fruit, is to be cut out, the young shoot pruned and nailed in its place, and a shoot originated from its base in the following season; but if the old shoot does not produce fruit it is not to be cut out in autumn, but to be retained for another year along with the young shoot, and in that case it will not be necessary to originate a young shoot from the base in the following season, but only in the season succeeding the removal of the producing shoot. There may be some difficulty in producing a succession shoot from the base of the preceding year's shoot, which may sometimes be overcome by training in from the main branch an eligibly situated shoot, and when this can be done it is very desirable to do so, as such shoots are more free in growth, and the successional shoots are more readily obtained from their base.

In addition to the shoots above mentioned, there will arise along the main branches a number of others. All those springing from the front of the branches should be rubbed off closely in the disbudding, which should be done early, so that no knife will be required. The best time to do this disbudding is when the shoots are sufficiently large to be laid hold of by the finger and thumb. Beyond this disbudding of the foreright shoots which result in nothing but useless breastwood, no other disbudding is required for the Apricot. Disbudding should be done early as already recommended, otherwise the bark is apt to be torn if the shoots are left until they become woody, and in that case they should be removed with a knife, and to make sure of the wounds healing, it is well in all cases to cut away all foreright shoots with a sharp knife, as the wounds heal more readily, and the liability to gum is lessened. All other shoots not required for laying-in and for the extension of the tree should have their points taken out at the second, or at most third leaf, and be stopped again at the next leaf, and repeatedly throughout the season. These will form spurs, or be plentifully sprinkled with fruit-buds by autumn, and upon them fruit may be produced in the following year. They should not be allowed to extend too much, but should be kept close to the wall, and any that are long should at the winter pruning be shortened to 2 or 3 inches.

Besides the shoots already described there will be more or less of shoots that do not grow longer than an inch or two, and produce a number of leaves. These are natural spurs, which ought not to be shortened or interfered with, except where they are very close together, when they may be thinned. From the natural spurs no long shoots will arise, or very rarely; but if there be, such shoots are to be pinched back to two leaves, as neither from these nor the young shoots that are stopped to induce spurs or fruit buds should long shoots be encouraged. They must be removed ere they have done mischief by shading the one and two-year-old bearing wood and the spurs.

Winter pruning is best performed early in February, but if the summer pruning has been properly attended to little winter pruning will be necessary.—G. ABBEY.

(To be continued.)

ALTERNANTHERAS—VIOLA CORNUTA.

WILL Mr. Bennett be good enough to give us a little more information as to the *Alternantheras* and *Teleianthera* varicolor? Did they grow to his satisfaction when planted out? Are they easily kept over winter, and do they retain their colour in a cool greenhouse, or do they require a stove? They are so very pretty, that, if not delicate, they must become invaluable for both in-door and out-door decoration. There is another *Alternanthera* advertised as *paronychioides*. Can any one report upon it?

I am growing Mr. Wills's variety of *Viola cornuta*, and I have not had an example of its dying off. Has any one noticed the habit of this plant when it is grown from seed or divided,

and when it is struck from a cutting? In the former case, it has an upright growth of from 6 to 10 inches, and in the latter it spreads the same distance on the ground, and is not more than 3 inches high. The same thing is to be observed in *Lobelia speciosa*. I am of opinion, however, that seedlings of *Lobelia speciosa* kept over the winter bloom better than cuttings taken in spring, but this order of things is reversed with regard to the *Viola*, the cuttings being preferable.—CALCAREA.

THE DOUBLE ROCKET.

SOME warped analysts of human nature affirm that the best and most benevolent among us feel, deep down in our heart of hearts, a sort of grim satisfaction at the misfortunes of our dearest friends; that with one set of feelings we condole with and sincerely commiserate them, while with another, or with a peculiar arrangement of the same, we inwardly chuckle over their adversities.

Now, without for one moment confessing to anything like this degree of depravity, I did indeed feel no inconsiderable amount of pleasure when visiting a gardener friend some time ago, and the cause of my so doing I will briefly explain. A few years ago I received from him a number of plants of the Double Rocket, with directions how to grow and propagate them. The plants were thankfully received, while the advice was as thankfully rejected. This was in the end of autumn, and the plants were kept in a cold frame during the winter, and in the following spring planted out in a piece of well-manured ground at the east end of a Peach-house. Here they received as much, if not more, attention than their rank and position in floral society entitled them to, and they grew amazingly, throwing wonderful flower-stems for young plants; but just when I was beginning, with that self-complacency so peculiar to gardeners, to congratulate myself on how I should out-Rocket my neighbour, death came; and never did worm-bit Gourd more speedily wither and die. Fully one-half of the plants seemed to be attacked simultaneously, the rest dropping off one by one, until only five or six out of the original three dozen remained. I had long been aware that they had a strong propensity for going suddenly off in this manner, but never before saw them do so in such a wholesale fashion.

My friend said it was very provoking, but had his advice been attended to such a thing would not have happened. Judge, then, how the fiendish part of my composition was thrilled within me with delight when, on going into his garden in June last, I found the most of his Rockets quietly withdrawing themselves from this world of grubs and maggots, and a boy planting *Asters* between them, so as to cover what would otherwise evidently have been in a short time a total blank.

Since my misfortune happened I have been paying some little attention to the culture, habits, and enemies of this rather interesting flower, and have lost this year only three out of about fifty plants.

The Double Rocket (*Hesperis matronalis*), is an old plant, having been introduced into this country about the end of the sixteenth century, and in the decoration of English gardens of these good old times it was largely used; but now neglected, despised, and utterly out of fashion, it is comparatively seldom met with, although many lavish their attention upon plants not half so beautiful. Easy of cultivation, and capable of adapting itself to almost any soil, it is yet a difficult plant to keep, owing to its liability to be attacked by the larva of a certain fly known to entomologists by the name of *Anthomyia brassicæ*, and unfortunately too familiar to most of us as the Cabbage grub. The parent of this pest deposits her eggs throughout the summer in the crown or collar of the plant, and these when hatched work their way into the interior, where they remain all winter, the plant meanwhile showing no symptoms outwardly of anything being amiss until spring, when, the tissues of the young shoots being all but destroyed, the leaves begin to flag and become yellow, and death ensues.

To prevent this state of things it is necessary to lift the old plants about the beginning of September, by which time they will be pretty well grown, and the grub-producing fly may reasonably be supposed to have given up egg-laying for the season. Carefully separate the young shoots, retaining as many roots to each as possible, and rejecting those which have none. Examine the base of each very narrowly for maggots, which, if found, must be picked out with the point of a knife. A rather close inspection, however, is needed to detect them, some being no larger than a pin-head; but as, if present at

all, they are generally located near the junction of the old crown, few of them need escape.

Another enemy to the Rocket, although not so dangerous, is the grey-streaked moth (*Tinea porectella*), the grub of which sews itself up in and eats the leaves at the points of the young shoots, but is easily extirpated by picking out with a pointed stick.

As before mentioned, the Rocket is most easily propagated by the division of the young shoots in autumn; but cuttings of the flower-stems also strike very freely when cut into lengths of three joints each and inserted in a shady border under a hand-glass; and the best time to do this is just when they are going out of flower, before they become too hard and ripe.

Interesting plants all of them, and with no mean pretensions to beauty, the Hesperises have yet been singularly neglected by the florist and hybridist, to whom they present a highly promising field for experiment; yet, so far as I am aware, there is no reason why we should not have them with as rich a variety of colours as the Ten-week Stock, which they already greatly surpass in size of spike, and even with all their grub enemies, in easiness of culture.—AVRSHIRE GARDENER.

PLANTS IN FLOWER IN JULY—POTATO DISEASE.

ACKLAM HALL, MIDDLESBROUGH-ON-TEES.

THE Potatoes here are severely attacked by the disease. It began about the 20th of July. There was thunder in the neighbourhood, and the atmosphere was very close for three or four days, with hot gleams of sunshine. I expected the attack, and watched the tops; the spots began to appear first on the leaves, then on the stems, and in three days one of the finest squares of Lapstone Kidney, Fortyfold, and Myatt's Prolific Potatoes I ever saw was blackened and nearly divested of leaves. The tubers are very much diseased. The disease is spreading much in this neighbourhood, and I am afraid the crops will suffer very severely.

July 3. <i>Phlox</i> Russelliana	July 18. <i>Fuchsia coccinea</i>
<i>Geranium dissectum</i>	<i>Cerasus laurocerasus</i>
<i>Heracleum sphondylium</i>	<i>Lathyrus grandiflorus</i>
<i>giganteum</i>	<i>latifolius</i>
" 7. <i>Aubrietia Campbells variegata</i>	" 20. <i>Silene latifolia</i>
<i>Lysimachia verticillata</i>	<i>autans</i>
<i>Sedum rupestre</i>	<i>pendula</i>
" 9. <i>Sedum acre</i>	<i>Senecio adonidifolius</i>
<i>sexangulare</i>	<i>Clematis integrifolia</i>
<i>album</i>	" 22. <i>Funkia Sieboldi</i>
<i>Campanula grandiflora</i>	<i>Eryngium amethystinum</i>
<i>Specularia perfoliata</i>	<i>Bourgati</i>
<i>Thalictrum majus</i>	<i>Hypericum quadrangulum</i>
<i>Achillea rosea</i>	<i>Lysimachia nummularia</i>
<i>plurica</i>	<i>nemorum</i>
<i>tomentosa</i>	<i>Lilium candidum</i>
" 11. <i>Solidago cambrica</i>	<i>Veratrum nigrum</i>
<i>virgaurea</i>	<i>Kalmia angustifolia</i>
<i>Stachys germanica</i>	" 24. <i>Cinerea maritima</i>
<i>Acroclium roseum</i>	<i>Campanula rotundifolia</i>
" 15. <i>Aconitum versicolor</i>	<i>retundifolia alba</i>
<i>Campanula nitida cœrulea</i>	<i>Epilobium roseum</i>
<i>nitida plena</i>	<i>Lithrum calcearia</i>
<i>Allium molle</i>	<i>Liatris plicata</i>
<i>Salvia bicolor</i>	<i>Azalea cœlestis</i>
<i>Eutocia viscidula</i>	" 28. <i>Verbascum nigrum</i>
<i>Cladanthus profliferus</i>	<i>Onopordon acanthium</i>
<i>Pentstemon Scouleri</i>	<i>Carduus Maritimus</i>
<i>Spiraea tridentata</i>	<i>Sedum dasyphyllum</i>
" 16. <i>Galium verum</i>	<i>Linum Lewisii</i>
<i>Lathyrus pratensis</i>	<i>Ononis arvensis</i>
<i>Spiraea laevigata</i>	<i>Tragopogon pratensis</i>
<i>Chiococca racemosa</i>	<i>Origanum vulgare</i>
<i>Pyrethrum parthenium</i>	<i>Hypericum calycinum</i>
" 18. <i>Oenothera biennis</i>	<i>Borago officinalis</i>
<i>Drummondii</i>	<i>Campanula arvensis</i>
<i>macrocarpa</i>	<i>Lavandula spica</i>
<i>Oxalis speciosa</i>	<i>Ligustrum vulgare</i>
<i>Tazetes pumila</i>	<i>ovatifolium</i>
<i>Mathiola annua</i>	<i>Vella annua</i>
<i>Stachys inodora</i>	<i>Tradescantia virginica</i>
<i>Lilium Thunbergianum</i>	<i>Andromeda serratifolia</i>
	<i>Cichorium intybus</i>

—M. H.

SAWDUST AS A MANURE.—The finest crops of Cucumbers I ever saw were grown in sawdust. The bottom of a wet sheep-yard was covered 2 feet deep with Oak, Elm, and Ash sawdust. After having lain there two years it was cleaned out, and employed for heating. The Cucumbers were planted in this with no other soil, and the result was the largest crop I ever

saw. Sawdust from a stable when cleared out ought to be put into a wet hole, and should lie there two years before being used.—G. TABER, *Seed-Grower, Rivenhall, Witham, Essex.*

NORTHWICH GOOSEBERRY SHOW.

THIS was held at the Angel Inn, Northwich, July 27th. The following is a list of the varieties, and weights:—

		dwts. gra
T. Lanceley	Red Seedling	20 4
G. Beckett	Yellow Seedling	17 18
T. Lanceley	Green Seedling	19 7
S. Shone	White Seedling	18 19
J. Wynne	Twins	Antagonist
J. Wynne	Premier Prize	Beauty
J. Hale	Steward's Prize	London
T. Lanceley	ditto	Leveller
G. Beckett	ditto	Matchless
S. Shone	ditto	Antagonist
T. Ball	ditto	Duke of Sutherland
R. Forster	ditto	Catherina
G. Plant	ditto	Telegraph
F. Jenison		Careless
G. Beckett	Red	London
S. Shone	Red	Lord Liverpool
J. Wynne	Red	Seedling Macaroni
T. Lanceley	Red	Clayton
S. Shone	Red	Speedwell
T. Lanceley	Red	Flixtonia
J. Wynne	Red	Beauty
J. Wynne	Red	Registrar
T. Lanceley	Yellow	Leader
J. Wynne	Yellow	Mount Pleasant
T. Lanceley	Yellow	Leveller
R. Forster	Yellow	Catherina
T. Lanceley	Yellow	Cramp
J. Wynne	Yellow	High Sheriff
T. Lanceley	Yellow	Pet.
J. Hale	Yellow	Peru
T. Lanceley	Green	Flunder
J. Wynne	Green	Thumper
T. Lanceley	Green	Shiner
ditto	Green	Stockwell
ditto	Green	Matchless
G. Beckett	Green	Seedling
ditto	Green	Bravo
ditto	Green	Rough Green
J. Wynne	White	Antagonist
ditto	White	Elizabeth
ditto	White	Hero of the Nile
T. Lanceley	White	Overseer
J. Wynne	White	Snowdrop
T. Lanceley	White	Peto
R. Forster	White	Freedom
T. Lanceley	White	Lady Leicester

—THOMAS DOBELL, *Seedsman, Secretary.*

ESTIMATE OF ROSES—ACIDS IN SOIL NO CAUSE OF VARIEGATION.

NOTWITHSTANDING all that has been written in favour of Maréchal Niel Rose, I still consider it far inferior in some very essential points to many older varieties. I have not yet succeeded in blooming it on the Briar, the first year from the bud, in anything like the profusion one would expect from the account given of it by some enthusiastic novelty-seekers. The individual blooms are good when well grown, and of good colour; but unless a considerable number of plants are grown it is useless expecting any flowers. It is good for a show Rose in cut blooms when a considerable stock is kept; but for any one who can grow but two or three plants of a variety, it is the worst introduction made of late years that I know.

Some writers recommend amateurs to visit the great Rose shows, to see what varieties to purchase. No advice could be more erroneous. To those who intend exhibiting Roses, and wish to know the best varieties for that purpose, the advice is good; but for those who simply grow a number of plants for floral effect, the case is widely different, some of the exhibition varieties being almost useless when grown for the flowers, and Maréchal Niel is one of the worst. Who ever saw a bed of upwards of thirty plants of Gloire de Dijon, Triomphe de Rennes, or Céline Forestier, with abundance of good, strong wood and healthy foliage, with less than a dozen flowers on the whole lot, buds and all counted? I should feel greatly obliged if any correspondent can name a place within thirty miles of London on either of the main lines of railway, where a stock of Maréchal Niel is growing, in the open ground, with as many blooms fully expanded, of good shape and colour, as there are plants. Compare this with either of the varieties mentioned above. In the bud state Maréchal Niel cannot approach Madame Fal-

cot. Is not the *Maréchal* much more nearly allied to the *Noisettes* than to the *Teas*?

With me Lord Herbert will not open a flower fit to look at; if the sun shines it scorches in the bud, and if the weather is damp and dull it rots off; but a most beautiful bloom of this variety, grown without protection, was sent to one of the large shows. The variety called *Princess of Wales* is of a splendid colour when it first opens, but is rather too thin. *Red Rover* is useless.

As high-coloured *Roses*, I recommend Charles Lefebvre, Duc de Wellington, Eugène Appert (should be worked on dwarf stocks), Fisher Holmes, Lord Clyde, Lord Macanlay, and Madame Victor Verdier. Of rose-coloured and rosy crimson—Anna de Diesbach, Beauty of Waltham, Colonel de Rougemont, Comtesse de Chabillant, John Hopper, Jules Margottin, Madame Thérèse Levet, and Victor Verdier. Of very dark velvety sorts, Empereur de Maroc and Prince Camille de Rohan withstand bright sun better than any. Madame Vidot, a very beautiful blush tinged with rose, is one of the very best shaped *Roses* grown; it should be worked as a dwarf. Madame Alfred de Rougemont, as an almost pure white, is very excellent either for pot-culture or the open ground. There is little difference in the pure white Perpetuals. Impératrice Eugénie and Mlle. Bonnaire both flower well, but are weak growers. Madame Freeman is a free-flowering white, but the blooms are too heavy for the wood. Xavier Olibo is not much. Rushton Radcliffe is third-rate. In the Hybrid Bourbon class Jules César and Rev. H. Dombrain are excellent.—F. FLITTON.

P.S.—Since writing you on the variegation of leaves (Vol. XII., page 385), I have mixed various acids with some soil and potted singly in three pots very small plants of *Brassica*, at the same time planting in ordinary soil in another pot one plant. The acids appear to have no effect on the foliage, but, singularly enough, the plant in the ordinary soil has become variegated.

JUDGING GRAPES.

The discussion as to judging Grapes being once more revived, I have been induced to ask myself the following question—Is it necessary to alter the present system of judging Grapes at horticultural exhibitions to that of tasting? I think not, for the present system works well, and with very few exceptions gives great satisfaction to exhibitors and employers; it is also convenient, and nine times out of ten the decisions of the judges are correct.

I maintain my opinion, that a bunch of Grapes of first-rate colour, be the variety what it may, has much more to recommend it than one of second or third-rate colour. It looks first-rate on the table; its flesh is firm and melting; its juice is rich and abundant, according to the variety, and it is in the highest state of perfection and flavour to which it is possible to bring the kind, showing at the same time with what skill and judgment it has been grown, and how uniformly the roots have acted in harmony with the branches and atmospheric treatment. Not so with an inferior-coloured bunch, its flesh is not so solid, it does not look well on the table, its juice is more abundant perhaps, but not so rich, and altogether it indicates a deficiency in culture in respect to the Vine being over-cropped, deficient in root-action, having bad soil and drainage, or being affected by some such cause. I have invariably noticed in my late vineyard that the best coloured Grapes always keep longest and best, thereby confirming the advice once given by Mr. R. Fish, who says that those who want their late Grapes to keep must have them thoroughly coloured by autumn. These are important circumstances in favour of colour in Grapes.

There is another method by which I have been convinced that flavour accompanies colour—that is, by allowing a perfectly coloured bunch to hang until it begins to lose its colour, and I find it also loses flavour in proportion, but not to such an extent as an inferior-coloured one, which will soon become worthless, simply through not being brought to that high colour and finish which I consider a pretty sure guide to good flavour.

I am well aware of the superiority in flavour which some varieties possess over others, but then the schedules of the London Societies are so arranged as to prevent as much as possible an inferior variety from stepping in before better ones, except in such cases as mentioned by Mr. Fowler, between the Dutch and Victoria Hamburgs, which I think are quite exceptions, and not of such frequent occurrence at our London shows as to warrant our present system of judging Grapes being changed

to that of tasting them, which system would necessitate other fruits being tasted, and, I fear, would not only increase the labours of the judges, but would be objectionable to employers, and cause dissatisfaction among exhibitors. Nevertheless, while paying due regard to colour, I would also do so to flavour where it was possible. And it is in the case of many local societies where I would call for this alteration; many such societies divide Grapes into two classes only (Black and White), without naming the sort to be shown. Here one often sees many varieties in each class, and, perhaps, Buckland Sweet-water taking the award in preference to Muscat of Alexandria, or Black Prince in preference to Muscat Hamburg, or Black Hamburg, when, without tasting, it is well known which has the best flavour, although, perhaps, the colour is only second-rate. To such societies I would suggest that they should name the variety to be shown, and follow in the track of the London societies where possible; then if the judges take colour as a principal guide, I venture to say their decisions will not be far wrong.—THOMAS RECOND, *Gardener to Colonel Lloyd, Ilkeshurst.*

WHILE the subject of judging Grapes is under consideration, I would beg to ask, What should be the flavour of Black Hamburgs (Muscats, Frontignans, and others in these classes by their peculiar flavour decide themselves)? In most cases proprietors who partake of a good dessert daily are of one opinion in this matter; yet we find judges at horticultural exhibitions differ more on this point than any other connected with Grape-judging. Some give preference to sweetness alone, though, perhaps, insensible to any of the real Grape flavour being present.

It is very common at provincial shows for judges to be guided by the eye alone, never tasting the fruit at all, and giving preference to large bunches. I have also known flavour, according to certain palates, rule the decision, though the fruit in appearance was unfit for any gentleman's table. One instance of this I give as an example. At a horticultural show, held a few years ago at an enterprising town east from London, I observed a dish of greenish-brown Hamburgs awarded the first prize, flavour being the only point considered by the judges necessary to decide (the schedule said the best dish of black Grapes, no number of bunches being given). On the same exhibition-table there were numerous dishes of excellent Grapes, to all appearance perfect. The other exhibitors, as might be expected, were dissatisfied with the judging. The managers of the Society could not account for it; the judges were inquired at, and the reply given was that the Grapes were like sugar, and sweeter than any others on the table. The judges were two in number, one of them an old man of great experience (?) in these matters, having judged Grapes more than twenty years, and never believed himself to be more correct in any case than that one. The exhibitor (who was anxious to establish the fact that his Grapes were best), allowed his fruit to be tasted by all present, most of whom corroborated the old judge's statement, that they were "like sugar," but also added, "water, and something else." They were such as would not be eaten by any one who could have the choice of insipid Gooseberries instead.

On the other side of the question it is not uncommon to see on exhibition-tables magnificent Grapes, both as regards colour and size of berry and bunch, but when tasted it is found that they would require several weeks to bring them to their proper condition. We have Grapes which were a month ago as black as Sloes, and to all appearance "finished," but which are only fit for table now. Fortunately, I have only had a few badly-coloured Grapes; these I had to give away, as their appearance would not be tolerated on my employer's table, however perfect their flavour might be, high colour and large berries being of great importance, and flavour indispensable. The size of bunches is not called in question when there are plenty of them.—M. TEMPLE, *Balbirnie, Markinch.*

I HAVE often heard it remarked that brown or red-coloured Hamburg Grapes are superior in flavour to black Hamburgs, the varieties being the same, and a gentleman whom I served in the capacity of under gardener, was never quite satisfied with the Black Hamburg Grapes, if they finished off with a black colour. Nevertheless, even at that time I was very sceptical on this point. The difference in the flavour of the varieties of Hamburg Grapes has, I have no doubt, a certain influence; but so also have the different states of ripeness. A grower for market living in this neighbourhood (Ilford), sends his Ham-

burghs to market as soon as they are quite black, although they may at the same time not be quite ripe. Those bunches which do not colour well must remain until they are quite ripe, consequently they are better-flavoured than the black Grapes from the same house; but this would not be the case if they were all cut at the same time. Now, it is the same with exhibitors; as soon as the berries are black the bunches are fit to cut for exhibition, while they would be better of being allowed to hang for ten days or a fortnight longer, if they had to appear on the dinner-table. Here, in a house of Hamburgs that were ripe in the last week of May, there are hanging Grapes of several different shades of colour, and those nearest approaching to black are the best-flavoured, and the flesh is also firmer; while in an adjoining house there are Hamburgs just ripening off, and some of the bunches are already quite black, but are not yet fit to send to table; and on comparing the berries with the brown ones in the earliest house, they are not yet fit to be matched with them as regards flavour. I think if comparisons were made in this way, the prize for flavour would at least generally be given to those Grapes possessing the highest colour.

I perceive that the Royal Ascot Grape receives a high character both in your Journal, and from some of your contemporaries. I could not judge of its merits when I saw it exhibited, as the bunches were crowded together in a basket. One can judge much better of the merits or demerits of a variety, new or old, if the bunches are laid out singly on boards.

The Trentham Black Grape here is a stronger grower than the Black Hamburg, but the berries do not set so well. Would that have any effect on the setting of the berries of another sort inarched on it?—J. DOUGLAS.

I AGREE with Mr. Thomson in his remarks on judging Grapes. I consider that all ought to be tasted by judges before these decide upon their awards. Mr. Thomson would give three points to flavour, and I should say flavour ought to go a great way in the judging of all kinds of fruit.

I think Mr. Dixon's observations about the colouring of Grapes are very true, especially as respects the inferiority in colour when manure water is used. I have found this to be the case myself. I have grown large bunches for the last seven years, and have used manure water from the farmyard, and they have generally been of a bad colour, but as for flavour they could not be surpassed. I have gained many first prizes at several horticultural exhibitions when others have had smaller bunches, but jet black, and when my employer has had the badly coloured Grapes on his table they have been preferred to some from the same house not so large in bunch, but all that could be desired in respect to colour. Gentlemen have told me these were not so sweet but better-looking. What has the eye to do with taste? For instance: How often do we see at horticultural shows a large Melon which, though apparently a first-class fruit, when cut tastes more like a Turnip, or much worse? I believe that over-cropping Vines prevents the Grapes colouring well.

I do not see how Mr. Thomson's ten points can be improved. I should say flavour ought to be the most important point.

As regards Mr. Alliston's remarks, I cannot perceive how judges can decide without tasting the fruit, and I do not think employers would object to two or three berries being cut off for such a purpose, as it could be done without disfiguring the bunches. All societies should state in their schedules what Grapes should be shown. Hamburgs ought to form a class by themselves, and that would do away with Mr. Alliston's difficulty.—W. HALLITT, *Cossington, Bridgwater.*

BEING a Black Hamburg of the deepest dye, polished with the best Day & Martin my kind master can procure, and finding by the opinions of some correspondents to your valuable Journal my supremacy is in danger of a severe encounter with a formidable army, a much larger force as to numbers than mine is, nevertheless, I do hope to rouse up the few blue blacks to stand up for their rights and not let invaders wrest them from us without a severe struggle. I think there should be men chosen for deciding our merits that should be able to do so without mutilating us in a show tent. As to a Mill Hill taking the laurels from me, I will never countenance a society that selects judges who are not able to tell by the eye, without tasting, what variety of Grape is brought against me. Much has been said and written respecting me. I have been from time immemorial extolled and admired, and have always done my duty with good treatment. Just at this time, and when

looking for fresh honours from so much noise about table decorations, to have my bloom spoilt in this way is more than I can endure.

Let reds say what they may, I consider my fast colour and perfect bloom gives me the preference, and I am ready at any time with my true drees on to show battle against all the wishy-washy reds brought against me.

I should be very proud to have my place amongst all the nobles of our land. I am found there occasionally, and think if my habitation with them were more general, I should not be assailed as I am at the present time.—BLACK HAMBURG WITH A GOOD THICK BLOOM.

A GIGANTIC TREE.

IN travelling from La Victoria, a small town in the province of Aragua, towards Puerto-Cabello, in Venezuela, the road leads, in part, along the northern shore of the Lake of Valencia, situated in a longitudinal valley nearly 1500 feet above the level of the sea. This valley is of unsurpassed fertility, and Humboldt, the great traveller, calls it one of the most charming realms he has ever seen in all his travels.

In the middle of the road above mentioned, three miles west of Turmero, stands the famous Zamang, an enormous tree, belonging to the sub-order *Cesalpinea*. It is not so much on account of the height or the dimensions of the trunk for which this tree is celebrated; but it is the size, and especially the horizontal diameter of its head, that attracts our attention.

Its head is somewhat of the shape of an opened umbrella, and covers very nearly an acre of ground. In 1857 I measured the head in its greatest diameter from E.S.E. to W.N.W. most carefully, and found it to be 206 feet 11 inches. Fifty years preceding it was found by Humboldt to measure in its greatest diameter 192 feet, French measure, which is equal to about 204 feet 6 inches English. Hence we see that this extraordinary tree has, within fifty-seven years, increased the horizontal diameter of its head only by 2½ feet, from which we may infer that it is of a good old age. The natives assert, moreover, that as far back as the discovery of the country by the Spaniards, three and a half centuries ago, the Zamang was, even at that early day, reputed for its enormous size. At the time I saw it, it was but thinly covered with leaves, and seemed to lack vigour of growth. The natives hold it in high veneration, and it was against the law to break even the smallest twig.

Besides their own enormous weight the branches sustain the additional weight of an astonishing mass of succulent heavy epiphytes and parasites, such as Bromeliads, Orchids, Cacti, Mistletoes, and fleshy Piperaceæ.—A. FENDLER (in *American Gardener's Monthly*).

ROYAL HORTICULTURAL SOCIETY.

AUGUST 6TH.

FRUIT COMMITTEE.—Mr. Cox, gardener to W. Wells, Esq., Red-leaf, sent a fine dish of Bigarreau de Mezel, which received the first prize for the best dish of the newer varieties of Cherries. Mr. Earley, gardener to F. Pryor, Esq., Digswell, sent in competition for Green-fleshed Melons Dr. Hogg, which, being of very fine flavour, received the first prize. Mr. Grieve, Calford, sent Queen Emma, which was over-ripe, and was, in fact, in a state of decay. From Mr. Rivers came fruit of the Late Black Bigarreau Cherry, very large and very firm in the flesh; the stone rather large. It received a first-class certificate. He also sent fruit of a seedling from Early York Peach, with round glands on the leaves; the flavour was very delicious, and the flesh tender. It is named Rivers's Early York. It likewise received a first-class certificate. Mr. J. Beach, gardener to C. J. Herries, Esq., Sevenoaks, received a special certificate for an excellent dish of Morello Cherries.

Mr. Wilkie, gardener to Mr. McHenry, Addison Road, Kensington, exhibited Lady Downe's and Black Alicante Grapes; and from Mr. Standish came fruit of his Royal Ascot Grape in fine condition. The decision of the Sub-committee awarding a first-class certificate to this Grape was confirmed. Mr. Henderson, of Thoresby, exhibited Thoresby Queen Pine, a large handsome fruit, which, however, was found to be very deficient in flavour; and Mr. Forsyth, gardener to Baron Rothschild, Gunnersbury, sent a handsome fruit of Smooth-leaved Cayenne.

Mr. J. Beach, gardener to C. J. Herries, Esq., Sevenoaks, also sent three dishes of handsome Gooseberries; Mr. Turner, of Slough, a dish of Black Naples Currants, the berries of which were of large size; and Mr. W. Nichol, gardener to T. H. Powell, Esq., Drinkstone Park, Bury St. Edmunds, fruit of *Passiflora quadrangularis* and *edulis*, perfectly ripe; the former was certainly the preferable. Mr. Poynter, of Taunton, sent two varieties of Peas—one, named Pearce's Gardener's Delight, which proved to be *No Plus Ultra*; and the other

appeared to be Tall Green Mammoth; and the Committee recommended that they be sent to Chiswick and proved. From Mr. J. Wilson, gardener to Sir Ralph Howard, Falham, came two large Cucumbers of the variety called Lord Harris.

GENERAL MEETING.—Rev. Joshua Dix in the chair. The business was confined to the election of ten new Fellows and the announcement of the Committee awards.

THE SUGAR CANE.

The Sugar Cane is one of a genus of many species of tall Grasses. Like most cultivated plants, it consists of several permanent varieties, differing in size, in the colour of the epidermis, and in the proportion of saccharine matter they contain. Like most of the cereals, the Sugar Cane has not been traced to its wild state. In its cultivated state it has been found in many independent places, often remote from each other, and bearing independent names. Its geographical limits are nearly the same as those of Cotton—that is, extending from the equator to about the 30th degree of latitude. Like Cotton, its culture has been pushed up to the 40th degree but even with less success, for the cane takes a year to arrive at maturity, and is therefore liable to be cut off by severe frosts.

In what country the Sugar Cane was first cultivated it is out of our power to discover; but, as far as we know, it has been immemorially cultivated in the tropical and subtropical parts of Hindustan, in the Hindu-Chinese countries, in the tropical and subtropical parts of China and Japan, in the Malay and Philippine Archipelagos, and in the tropical islands of the Pacific. There is no evidence of its having been cultivated in any country west of the Indus. It was unknown as a wild plant in Australia and New Zealand, and is unquestionably an exotic in America. The Greeks and Romans knew nothing of sugar but as an article of trade. They were uncertain about the country which produced it, and ignorant of the plant which yielded it. The Arabs, on the contrary, brought the plant itself from India, with the Indian name of its produce, cultivated it in Syria, in Egypt, in Greece, in North Africa, in Spain, in Sicily, and in Southern Italy, manufacturing sugar from it in all these places.

At what time the Arabs introduced the culture of the cane and the manufacture of sugar into Syria and Egypt is unknown, but it is ascertained that sugar was imported into Venice from the countries enumerated at the end of the tenth century. The Crusaders found the cane cultivated in Syria as early as the beginning of the twelfth century. In the year 1420, or seventy-two years before the discovery of America, the Portuguese carried the Sugar Cane to Madeira. In the fifteenth century the Spaniards carried the cane and manufacture of sugar to the Canary Islands, from whence they were conveyed to tropical America and its islands. In 1503, or about eleven years after its discovery, the culture and manufacture were fully established in Hispaniola. Sugar was, however, an article of consumption in Western Europe long before the discovery of America. England was supplied from the emporia of Venice and Antwerp, and in the time of Shakspeare the name of the article was so familiar as already to have its secondary or figurative meaning, as in the expression, "sugared words."—(Mr. Craufurd on the *Migration of Plants*.)

NEW PEAS.

MR. H. A. STREPUENS, of Ealing, has reported so favourably on Taber's Early Perfection Pea, that it is scarcely necessary to add anything to what he has so well stated. It certainly produces more haulm than either Dillistone's, Ringleader, or Dickson's First and Best, probably on account of the superior strength of constitution and hardness which it undoubtedly possesses. Now this is an important point, and it deserves recognition from the market gardener who grows a quantity of early Peas under field culture, both for the yield and for the straw. The latter is of considerable value to the market gardener, and I have no hesitation in saying that while Taber's Perfection Pea will produce a crop as early as any variety of a similar character, it also yields a larger quantity of straw, perhaps to the enhanced value of some £2 or £3 per acre.

Taber's No. 68 must not be too rudely dismissed as identical with Dickson's Favourite. With me, on stiff strong land, it grows from 12 to 18 inches high—dwarfer than Dickson's Favourite: the pods are larger, it crops plentifully, and it is of a rich flavour when served for table.

Last year Messrs. Stuart & Mein, of Kelso, sent me a large,

white, wrinkled Marrow Pea, containing some seeds slightly olive, which they called The Prince. I was much pleased with it last year, but wished to try it against Mr. Turner's Premier, a variety very similar in character. In height (about 2½ feet), and in habit they are very similar, but The Prince is the earlier by a few days. Both are a little later, perhaps, than Veitch's Perfection, but more robust and hardy in the habit. The Prince has a smaller pod than Premier, but it is literally crowded with fine Peas; in fact, some of the pods burst open, there not being room enough for the Peas. Both are very fine varieties, and for a main crop one or the other should be grown. They bear profusely, literally from top to bottom.—RICHARD DEAN, Ealing.

PARIS UNIVERSAL EXHIBITION.

REPORT ON FRUITS AND VEGETABLES, DRIED OR PRESERVED.

BY ROBERT HOGG, LL.D., F.L.S.

THIS class (71), embraces all such fruits and vegetables as are in their natural condition, or are dried or preserved otherwise than with sugar.

Those who are interested in the study of these subjects will find throughout the various departments of the Exhibition ample opportunities of gratifying their taste and of extending their information; but it is much to be regretted that in too many cases the collections of foreign countries are not so useful and instructive as they might otherwise have been if the objects had been more generally named, and pains had been taken to furnish such information as would have enabled visitors to distinguish between the various objects exhibited. In the Portuguese and Italian departments, for example, there are immense collections of Haricots, many of which are not generally known; but each variety is simply labelled "Haricots," and no means are available for ascertaining the names by which to distinguish one from another. This is also particularly the case in the Algerian department, where there are collections of Oranges and dried Figs, not any of which are distinguished by names by which they might be identified.

Of the Fruits in their natural condition the collection which is the most attractive and interesting will be found in the Greek department. It consists of fifty-three distinct varieties of Oranges, many of which are of great size and beauty, while others are peculiar either from their form or colour. The cultivation of Oranges having of late years become a prominent feature in English horticulture, and the facility with which they may be ripened in the cheap glass houses now so general in the country, a description of the leading varieties in this collection will prove highly useful, as there are few if any of them that already exist in our gardens.

The different kinds of Oranges are divided into, 1, Sweet Oranges, or those of which the St. Michael's may be taken as the type; 2, Bitter Oranges, called by the French Bigaradier, and of which the Seville Orange is an illustration; 3, Lemons; 4, Citrons; 5, Bergamottes or Limes; 6, Shaddocks or Pampelmous; and 7, Forbidden Fruit. Among the Sweet Oranges there are the St. Michael's, the Blood Orange of Malta, and the Elliptic or Egg-shaped Orange, all of which are familiar varieties. But there is a variety which surpasses them all, and is called China Orange, or *protokallion tes kallamatas*, a large handsome fruit, 3½ inches in diameter, of a deep orange colour in the skin, which is smooth, like that of the St. Michael's. In flavour this is the finest of all. Then there are the Genoa, a variety similar to the St. Michael's, but with a coarser surface, and the Sweet Orange Candia, both which are very excellent varieties. There is also a variety with a singular bossed surface, from which circumstance it is called gibbosum. The small flat variety which we call in the fruiterers' shops in London the Tangerine, is here called the Manderine or *Mandarinion*.

There is a great variety of the Bigaradiers, or Bitter Oranges, many of which are singularly curious and ornamental. Of these the most striking are one called *Kretiko neranzi*, in Chios; *Phakoyra*, in Candy; and *Phraponeranzo*, in Peloponnessus. It is from 4 to 6 inches in diameter, of a rich deep orange colour, and has a very rough, warted surface. The other is called *umbilicata*, and is also of a large size, being from 3½ to 4 inches in diameter, of the flat shape of the Manderine, and with the stalk and the apex deeply indented. A very beautiful variety of this class is a medium-sized fruit, finely striped, some being of a pale lemon colour, with deep orange longitudinal bands; and others of a deep orange ground, with pale lemon-coloured stripes. This is called "*Hernaphrodite de Genois*." There is a curious variety, called *corniculata*, or Horned Orange, from horns growing out all round the upper part of the fruit. These horns are the points of the carpels, or "the quarters," of the fruit which have become detached and grown out, and, departing from the normal form, assume this singular appearance. There is a large fruit which, though it belongs to the class of Bitter Oranges, has a sweet flesh, and is called *Glykoncranzi* and *Neranzia tes kos*; but one of the most remarkable is a very large Pear-shaped variety, 6 to 8 inches long, with a rough warted surface and uneven outline. It is called Bigaradier a gros fruit.

Of Lemons there are not so many varieties; and those most worthy

of notice are the Greek Lemon, *Skaramankas tes karoystou*, and an immense variety 4½ to 6 inches long; the "Deux Mammelons," also a large oval variety, with two great nipples, one at each end. The Lemonier-bigarrade is a hybrid between a Lemon and a Bitter Orange, some being nearly round, with an orange colour, while others are oval, and of a pale lemon colour. There is a small egg-shaped variety, which has red flesh and variegated leaves, and this is called *Lemoni Zokkimon*. The Naples Lemon is a very small variety, about the size of a pigeon's egg, and is principally used for comfitures. Then there is a sweet Lemon, which is about the size of an ordinary Lemon, but with a sweet flesh, and very agreeable.

The Citron de Leonide is a large, rough, warted variety, and is the only one of that kind exhibited.

The Bergamottes or Limes are more numerous. They are of the colour of a pale lemon, and rounder than that fruit usually is. The most remarkable in this class are two kinds of Sweet Lime—one called *Zacharolemonon*, which is a small, round, and rather oblate fruit, lemon-coloured, and with a large nipple at the end like a Lemon; and the other *Glykolemonon*, which is quite round, and of a deeper and more orange colour, and with not so large a nipple. The common Bergamotte is that which furnishes the perfume known by that name, and which forms one of the principal ingredients in eau de Cologne and other compounds of that class. There is also the aromatic Lime of Chio, a small fruit of the size and shape of the Manderine Orange, and has the same aromatic odour which that variety has, but is distinguished from it by being of a pale lemon colour and having an acid flesh. There are several specimens of the Shaddock and the Forbidden Fruit, the latter being distinguished from the former in being pear-shaped, the former being round.

Oranges occur also in the Algerian and Italian departments; but, as they are not distinguished either by names or numbers, no reference can be made to them. Some of the specimens are very good, and among them may be observed a large Fingered Citron, the development of which is on the same principle as the Horned Orange, already noticed in the Greek department.

The Dates in the Algerian department will form a good subject of study, particularly a collection of fourteen varieties in boxes, all carefully named, and which come from the pépinières of Biskra. These vary in size, form, and colour, the last character varying from a pale brownish cream colour to an almost black. The variety usually met with in the shops of Britain attached to the rachis, or stalk, in strings, is called "Béglet noir de Souf." These are generally covered with a saccharine glaze, as is also another and a much larger variety, also common in the grocers' shops, and not attached to the stalks, called "Stima de Biskra." From the Algerian Government garden of acclimatization there are no less than fifty-five varieties; and from the "pépinières de Biskra" there is another collection of fifty-four varieties. These, for the most part, are small, dry, and farinaceous, many of them not larger than an Olive; and it is these that form the staple of the food of the Arab population. All these varieties, it may be well to know, are varieties of *Phoenix dactylifera*, which is as fertile in producing varieties of fruit as our Apple and Pear are. In the Egyptian department there are also many varieties of Dates, among which will be observed two varieties which form the large dry-skinned Dates of our shops. These are called "Dattes de Dongolah" and "Dattes Hamry de Belleis et Salanieh." There is also a variety which has no stone, and is called "sans noyau;" and, if imported into commerce, would doubtless prove acceptable from that circumstance.

Dried Figs are an important feature in the Algerian, the Italian, the Portuguese, and the Turkish departments. Here, again, it is much to be regretted that no names or numbers are attached to the different varieties, so as to afford some index as to the sorts that are usually employed for drying; and the persons in charge of these departments are perfectly ignorant on the subject. It will, therefore, be permissible only to observe the various forms in which they are made up. Some of these are sufficiently curious—as, for example, those impaled on wooden skewers, like larks for the spit. Some are pressed into shallow frames made of *Arundo donax*; others are squeezed in masses, like thick sections of a Stilton cheese; while others are made to resemble squares of Windsor soap or German sausages. There is a mode of making up Figs exhibited in bottles, which consists in cutting two fruits longitudinally as far as the stalk, then spreading them out and applying the two inner surfaces to each other; in this form the fruit is dried, and in drying the two surfaces adhere, and they are then mounted on skewers or strung on a cord. The same fancies in the way of packing may be observed in the other collections; but in no case are there any exhibitions of those large, handsome Figs which are to be obtained in the shops of the United Kingdom.

Almonds are well represented in the Italian, Algerian, and Portuguese departments. The Jordan Almonds may there be seen under the names of "Sultana" and "Della Dama;" while the other sweet and bitter-kernelled varieties will be found under their various names.

The other kinds of dried or natural fruits that are exhibited are dried Apples, Raisins, Mulberries, Pistachios, and pignons, the latter being the kernel of the seed of the Stone Pine (*Pinus pines*). In most of these countries the Jujube is also shown. This is sold in Covent Garden Market under the name of "Japomicas," and with what reason it is impossible to tell, it being the fruit of the *Zizyphus*

vulgaris, a tree extensively grown in the south of Europe, where its fruit is dried, and serves as a winter dessert. It is from this fruit that the confection called "jujubes" receives its name, and which should consist of gum arabic and sugar dissolved in the decoction of this fruit and then evaporated to its proper consistence; but, as made in this country, the fruit forms no part of the ingredient. In the Algerian department may be seen specimens of the Lotos of the ancient Lotophagi, and which is the fruit of *Zizyphus lotus*; they are about the size of a Cherry, and of a purplish colour. In the interior of Africa these are pounded in a mortar and made into cakes, which are eaten by the natives.

Preserved Fruits.—In the Algerian collection are good specimens of the fruit of *Carica papaya*, or Papaw. This, when young, is used for sauce; and water impregnated with the juice acquires the property of rendering all sorts of meat steeped in it tender. The flesh of old fowls or other animals becomes tender when fed on the leaves and fruit, and joints of meat are prepared for cooking by being hung in the upper branches of the tree. There are also examples of *Sechium edule*, or Choko, which is now considerably grown in Algeria as a substitute for the Potato. The only other fruits that are preserved are Manderine Oranges, Peaches, and Loquats, or Japanese Medlars. In the Dutch department there are excellent examples of Apricots, Peaches, Plums, Cherries, and Mulberries. Similar collections may be seen in the Bavarian department, and a very extensive collection is sent by the United States of America, consisting of Pine Apples, Peaches, Cherries, Gooseberries, red and yellow Tomatoes, Plums, Grapes, Pears, Siberian Crab, Lawton Raspberries, Barberries, Whortleberries, Quince, Currants, and Sweet Corn. These are all preserved in spirit. Russia exhibits dried Apples, Pears, Prunes, and Melons cut in slices.

VIOLA CORNUTA AND LUTEA AS BEDDING PLANTS.

MR. WILLS asks for information from me concerning *Viola cornuta*, and if the favourable opinion I entertained of it last year is still maintained. I have great pleasure in stating that after having cultivated it throughout last season and up to the present time, I am more delighted with it now than when I last wrote respecting its merits. With us it is perfectly hardy, and, which is of the greatest importance at the present day, this invaluable plant forms one of the most lovely and effective beds for early spring-flowering I ever beheld, commencing to flower in April, and continuing to do so in the greatest profusion up to this time. Temperature and the weather do not injuriously affect its beauty to the same extent as other early spring flowers; and to show Mr. Wills the high estimation in which his favourite plant is held at Denbies, I have had planted nearly one thousand plants of it for the edgings of a series of ribbon-beds, which extend in one continuous line from the south end of the conservatory. These plants were reproduced from cuttings in January last, and were planted out in the end of May. They now form a charming edging 1 foot wide and in full flower.—J. DREWETT.

I AM glad Mr. J. Wills has spoken so favourably of that beautiful bedding plant, *Viola lutea*. It deserves all that he has said in praise of it. I have a small circular bed of it and Carter's dwarf lilac *Lobelia Beauty of Ravensbourne* planted alternately, and the two colours contrast very well indeed. The flowers of *V. lutea* are longer and broader in the petals than either of the two varieties of *V. cornuta*—viz., Mauve Queen and Purple Queen, and the colour is a bright canary yellow. It is a vigorous and yet dwarf and close grower, and blooms and seeds profusely. I obtained my plants of *V. lutea* from my brother, Mr. W. Dean, Bradford Nursery, Shipley, Yorkshire, and they are, I imagine, identical with Mr. Tyerman's variety. It is a perfect gem for the summer flower garden.

I saw at Kew, early in the spring, a variety of *Viola lutea* considerably smaller in the size of the flower than that which I am growing, while the foliage was not nearly so robust. The weather was very cold, and the plants were by no means young. Probably this will account for the apparent difference both in size of flower and strength of foliage; for my own plants were fresh from the cutting-bed when I received them very early in the year.

I can bear testimony to the differences to be seen between the two varieties of *V. cornuta* as stated by Mr. Wills. I can the more readily substantiate his statements, as I obtained the plants of Purple Queen from a friend who had them direct from Osberton, while the other variety came in a similar way from Mr. Wills. In growth, in constitution, in the jagged edges of the leaves, in the size of the flowers, and the breadth of

the petals, I trace substantially the differences as put by Mr. Willis. I have not, however, lost a single plant of Mr. Bennett's variety—in fact, they are all doing well.—RICHARD DEAN, *Ealing*.

DUTY-FREE TOBACCO.

I AM afraid the Government duty-free tobacco will fail to prove so great a boon to the gardener as it was expected to be. The quantity of sulphur added renders its combustion in the ordinary manner in which tobacco is used so destructive to vegetation, that I expect few will attempt its use in that way; or, if so, they probably will not repeat the experiment. The presence of sulphur along with the bruised or ground tobacco deprives the latter of some of its virtues, the opinion of Hop-growers who have in years gone by used many hundred pounds worth of both these substances separately, being that although sulphur counteracts to a certain extent the spread of mildew, it rather favours the production of the Hop aphid. Many growers, indeed, go so far as to say that the aphid will absolutely fatten on it. Be this as it may, certain it is that the Government prepared compound of tobacco, sulphur, and assafoetida, is not a safe article to fumigate glass structures with. In the Hop gardens its use along with soft soap as a decoction has been subjected to extensive trials and with varying results, which it would be interesting to note hereafter. My purpose at present, however, is to advert to a suggestion recently made in this Journal—that cayenne pepper should be substituted for brimstone, as it would be impossible for any one to smoke such a mixture. This is no doubt very true, but can cayenne pepper be had in sufficient quantity and at a sufficiently cheap rate to meet the requirements of the case? And further, is not the combustion of cayenne pepper exceedingly hurtful to all who have anything to do with it, excepting the green fly, which it does not seem to injure?

Twelve years ago, or more, the use of Capsicums mixed with tobacco was recommended in gardening periodicals, and many trials were made without there being in any case, that I am aware of, results sufficient to compensate for its irritating effects on the throats of the men who were engaged in the supposed slaughter of enemies, which next morning were reposing in camp unhurt, or nearly so, by the previous night's attack. Now, as I suppose cayenne pepper and Capsicum pods to be nearly the same in their effects, both, it may be concluded, should be employed with caution; not that I apprehend any evil effects as regards vegetation, but unless they can be proved to be more destructive when used as a fumigating material than has hitherto been the case, we ought to look out for something else. I must confess to having been not a little puzzled to find so little harm done to the green fly about the period alluded to when Capsicums had been burnt. I have, therefore, but little hope of much good arising from a repetition of the experiment, although I shall be interested in the result.

The present season in the county of Kent, and I believe in all the Hop-growing districts of the kingdom, has been one of the most remarkable ever known for the multitude of aphides which have infested the Hop. The early growth of the plant was vigorous, and in most cases the bine reached the top of the poles before any serious attack by vermin was made on it; but by-and-by the spread of this pest, aided by the cold, ungenial weather, caused consternation amongst the growers, and compelled them to adopt measures to combat the evil. Wagon-loads of soft soap and tobacco in different conditions have been used; generally the tobacco and soft soap were boiled together, the liquid reduced by the addition of more water, and the plants syringed. In one ground as many as one hundred men were employed for some time in the attempt to remedy the evil in this way. Close observation revealed the fact, that although most of the insects were destroyed, a new brood made its appearance in three or four days, and the operation had to be repeated in a week or less, the persevering insect meanwhile following up the new growth to the very tips. Doubtless much of the evil is due to the ungenial summer we have had up to this time; but enough has been proved to show that a good crop of Hops cannot be ensured by any amount of assiduity on the part of the cultivator when the attack is so determined as it has been this season. Not a few of the old school of cultivators who have mostly left their plantations to take their chance, console themselves with the reflection that they are not much if any worse than their neighbours, and that a natural enemy to the aphid, which in ordinary years follows in its wake and clears off what is remaining of this pest, has not

been destroyed in their grounds, which it certainly has been in those where dressings of tobacco water, &c., have been perseveringly applied. This enemy of the green fly, known by the name of fly golding, is always hailed as a friend, and its destruction is guarded against by those who benefit by its operations. Even when it invades dwelling-rooms, which it does in winter, to the annoyance of good housekeepers, its destruction is forbidden by the master of the house.

Burning Capsicums will most likely be a costly operation to those who engage in it, and I have but little faith in the utility of the Capsicum as an addition to tobacco farther than preventing the latter being used by smokers; but I hope that something else may be suggested, as sulphur in the proportion of 25 per cent., which we are told is the Government prescription, must be fatal to both vegetable and animal life when burnt in a confined place like a glass structure.—J. ROBSON.

VISITS TO GARDENS PUBLIC AND PRIVATE.

MR. RICHARD SMITH'S NURSERIES, WORCESTER.

EVER since, some two or three years ago, Mr. Keane, in writing about these famous nurseries, said in reference to the Roses, "How 'D., Deal,' would revel amidst the beauties he would there behold!" or words to that effect, I have greatly desired to visit this ancient city. The other day, duty calling me to Cheltenham, I made use of the opportunity of running over to Worcester, and in no wise regretted the journey taken, though it was on St. Swithin's day, when the saint verily chose to give us a "taste of his quality," for it was in a thorough downpour of rain that I started from the railway station at Worcester for St. John's, where I was told the nurseries are situated, a walk of two miles. Soon after I got there, however, the weather cleared up; and as everything was fresh and green after the rain, it made it the more agreeable, the Roses being the only sufferers, and they were considerably dragged by the heavy rain, but not nearly so much as I had anticipated when I set out. I had intended to have gone round by Hereford and seen Mr. Cranston's nursery, but the rain and the many objects of interest at Worcester effectually prevented my doing so.

The nurseries of St. John's comprise somewhere about one hundred acres, situated between the Malvern and Bransford roads, the soil being mainly of a light loamy description, admirably adapted for shrubs, but not so good for Roses. The great difficulty in all such soils is provided for by a large series of underground pipes and flexible hose, which, both inside and outside, are constantly in use. The very first glance that I gave at the nursery convinced me that we had here some one who took pride in his establishment, and who was a man of order and neatness. Weeds were really rarities. As, however, the houses are situated at the entrance of the nursery, and as there was sufficient in them to interest me, I shall devote this paper to an account of what I saw there. And here I must frankly own that the sight of Mr. Smith's orchard-houses, and the taste I had of the fruit grown in them, have made me a convert to their usefulness. I have long maintained that they were a fallacy, and indeed I am not yet quite sure that the original orchard-house, *pur et simple*, without any heating apparatus, is yet to be considered a success—I, at least, have never seen one that was so.

Mr. Smith has two houses—one, a magnificent structure about 200 feet in length by 27 feet in width, and another about half that length. In the former there was a variety of fruit of all kinds; in the latter Peaches and Nectarines formed the exclusive crop. This house was heated, or rather could be heated, by the hot-water pipes, but not until the water had passed through all the other houses, so that its heat was, comparatively speaking, small; still it must have been pretty well used to have now, and to have had for some time, fully ripe Peaches and Nectarines; for in the cool orchard-houses which I have seen the fruit was only ripe a very little while before the wall fruit came in. The trees were all in pots, and on my saying that their life was a brief one, Mr. Smith said, No, that is a great mistake; that Lord Somers's gardener had told him only a few days before my visit that he had forced the same Vines for five or six years in pots; that the average produce had, up to last year, been 10 lbs. a Vine, but that last year he had taken 14 lbs., and without, he believed, any detriment to the Vine.

But to return to the orchard-house. A row of Cherry trees had been placed on each side of the walk. These had fruited, and the fruit had been gathered about Easter. Straw-

berries had been placed on shelves along the sides of the house, and now it was filled from end to end with Peaches and Nectarines; of these already 100 dozen had been gathered, and there were in all about 350 dozen of good saleable fruit, the highest number on any tree being, as far as I could see, about thirty-two or thirty-three. Now, this fruit was of good size; the flavour not, perhaps, so good as when grown in a regular Peach-house, but certainly superior to that of wall fruit. These trees are potted once a year and top-dressed once. Great attention is paid to the watering, to the neglect of which Mr. Smith attributed a great many of the failures in orchard-house-culture. The pots were mostly 9 and 10 inches, a few a little larger, so that there did not seem to be much mystery in the mode of cultivation. The fruits grown, at least those which were ripe and eatable, were Early Savoy, very similar to Grosse Mignonne, somewhat more flattened in shape, and a little paler; Grosse Mignonne, a variety too well known to need any commendation, the flesh was rich and highly flavoured; Early York, with greenish white flesh, a very juicy and melting Peach; Bourdine, an excellent Peach, with very rich and sugary flesh, and of a very deep red colour near the stone; Bellegarde, another well-known Peach, with pale yellow flesh, of a rich and vinous flavour; Chancellor, this I did not consider good, probably the fruit was not in good condition; Early Albert, this is I believe one of Mr. Rivers's Peaches—the fruit, as I tasted it, lacked flavour; Barrington, a fine and highly flavoured Peach, light in colour, with yellowish flesh. Of Nectarines there were Hunt's Tawny, with pale orange skin, deep red on the sunny side, orange-coloured flesh, rich and highly flavoured; Rivers's Orange, a seedling from Pitmaston Orange, which it very closely resembles; Hardwicke, raised near Bury St. Edmunds, at Hardwicke House, a most delicious Nectarine, melting and highly flavoured, one of the best; Downton, raised by Mr. Knight from Violette Hâtive, a well-flavoured variety with pale green flesh, first-rate sort; Violette Hâtive, a well-known variety of good quality, fruit here excellent; White Nectarine, skin almost white, flesh the same, rich and juicy; Pitmaston Orange, raised by Mr. Williams, a great friend of Mr. Knight's. The house where Mr. Williams lived adjoins Mr. Smith's grounds, so that this variety is of peculiar interest here. It is one of the very best Nectarines; the tree is hardy and a prolific bearer.

Such were the principal kinds in fruit, and as many of these are not ripe out of doors until September, the advantage of having them in-doors is evident, besides the certainty of the crop. In the large house there was a great number to come in later; but here I tasted the Moorpark Apricot with a depth of flavour one is not accustomed to find in the fruit out of doors. Here, last year, fruit was gathered at midsummer, and continued to be gathered as late as November.

The ventilation in front is managed by a sliding apparatus something like a razor-stop, and the ventilators can be opened and shut with the greatest ease, 50 feet at a time.

Besides these houses there were others filled with Vines in pots, about as fine and healthy a fruiting set of canes as I have seen anywhere; houses, too, full of Fig trees, very healthy and stocky plants, which will no doubt be greedily snapped up by-and-by, for the severe frost of last winter has been most injurious to the Fig in many parts, and perhaps those who are fond of it will gladly adopt in-door instead of out-of-door culture as more certain and satisfactory. Then there were conservatories and greenhouses and a stove, all filled with healthy stock of the various kinds of plants most in request. Here, too, the order and neatness for which the nursery is distinguished also prevailed. Thus, the plants in the greenhouses were arranged very much as we should do a ribbon-border. The front row was composed of Iresine Herbstii, which Mr. Smith thinks does best on clay soils; then there was a row of Mrs. Pollock Pelargonium, then one of *Coleus Verschaffeltii*, then a row of variegated Pelargoniums, and the remaining upper shelves were filled with a general collection of the best bedding Pelargoniums. Not only does this add greatly to the appearance of the house at a time when houses are all in confusion, generally speaking, but it would give many persons a very good idea as to the combination necessary for making a grand effect in their gardens. In all my peregrinations through these houses I did not see a single unhealthy plant; there was no fly, mildew, rust, or any of the thousand ills that plants are heir to, but everything most healthy, and in a fit condition to be sent into any garden in the kingdom.

I hope next week to make some remarks upon the out-door department; but I cannot forbear adding that nothing could exceed the kindness and courtesy with which I was received,

and I have certainly spent fewer pleasanter days of late than that in which I rambled through Mr. Smith's nurseries.—*D., Deal.*

WORK FOR THE WEEK.

KITCHEN GARDEN.

This is the period at which to lay the foundation of a sure supply of vegetables and salads for the ensuing winter, and time lost now in this respect cannot possibly be regained. Supposing that all the spring and midwinter Broccolis have been planted some time, and that Turnips for October and November are also in, still it remains to insure a continuous succession of *Cauliflower* and autumn *Broccoli*, also a full supply of salads. Cape Broccolis, although apt to start, are amongst the most useful for the certain supply of the house if the family is resident in the country throughout October and up to Christmas. Where such is the case, the last planting, a good breadth, should be immediately made. A rich border should also be prepared for Cauliflowers; these, planted immediately, will supply the table until Christmas, provided they are secure from frost. *Endive*, this, also, must be planted out with a liberal hand. *Lettuces*, sow Brown Cos, the Black-seeded Green Cos, and Brown Dutch Cabbage Lettuce for standing the winter. *Onions*, take up the pickling sorts, and lay down the tops of the main crop with a soft broom. Some of the White Spanish may be sown. Let a clearance be made forthwith of all decaying crops or those unprofitable, and supply their places immediately with Coleworts and other winter crops.

FRUIT GARDEN.

Gather early Pears and Apples, their fitness for gathering requires particular attention. If they are taken a few days too soon they will be insipid and watery, for they do not become sugary by lying in the fruit-room, as is the case with later varieties; but, on the other hand, these early kinds ought not to hang a day beyond the precise time they prove best. Attend to trees budded and grafted this year, and see that they are not injured by the matting used in tying. Dress off the tips of the stocks behind the grafts. If this be done now the wounds will be nearly, or in some instances completely, healed over before winter. Wall trees will require to be kept in order as previously directed. This moist season has encouraged numerous outbreaks of lateral shoots. Where the wall is already covered with foliage these recent growths are worse than useless, they shade the more efficient portions, whilst they draw sap from the tree, but return little; for, as Mr. Knight, of Downton, observed, the elaboration of the very young foliage is appropriated to its own development and the growth of the pushing shoot.

FLOWER GARDEN.

Roses budded last month should have the bandages loosened or removed if the buds have taken well, and the shoots should be shortened back to prevent wind from breaking them off near the buds. Continue layering Carnations, &c. Early-struck Pink-pippings should now be planted out in flower-borders, or beds, in the reserve garden for transplanting in autumn or spring. Sow Intermediate Stocks in the open ground, to be potted off when fit, for early blooming next year. Sow, also, Poppy Anemone seed, the least sprinkling of earth over the seed is sufficient. Laurels and other strong-growing shrubs, injuring choicer kinds by overgrowing them, should be cut back to allow the air to circulate, in order to harden the wood before winter. Those who can find time may pick off the seed-pods from Rhododendrons. This will add much to the strength of the blossom in the next year. The Azaleas, of course, will benefit by a similar proceeding.

GREENHOUSE AND CONSERVATORY.

No time should now be lost in putting all houses, pits, &c., in thorough repair. The glazing should now be well looked to, and painting done where needed. With regard to the interior of houses painting must ever depend on the crops. White-washing, however, can be managed at all times. The lime should have abundance of sulphur mixed with it. No one need be afraid of using any amount on cool surfaces. The repairing and cleaning of flues will, of course, suggest itself, and the examination of boilers or other apparatus where suspicion may rest, should be proceeded with forthwith. Camellias if forced into wood will be rapidly advancing. They should in this state be out of doors in a cool place on cool flags or coal-ashes to prevent the earthworm from deranging the drainage. Chrysanthemums should now receive their last shift, if possible, using chiefly fibrous loam with plenty of charcoal.

This is the best way to keep them stiff in habit and to preserve their lower leaves. Any necessary amount of strength may be imparted to them, when the flower-buds are formed, by good liquid manure. Look well after winter-flowering plants of rather a common order, such as *Cinerarias*, *Verbenas*, *Scarlet Pelargoniums*, *Heliotropes*, and *Roses*. *Cinerarias* must now be potted off, whether from seed or from suckers; also, *Chinese Primulas*, remembering to give the last shift immediately to those intended to bloom in October and November. *Scarlet Pelargoniums* and *Heliotropes*, to bloom, must be potted. The continued rains are likely to be prejudicial to all hard-wooded newly-shifted plants in pots: therefore, either protect them with canvas or remove them under glass until a change of weather takes place. Many of the plants which have had a liberal shift should have attention paid to training, &c. Cuttings of the desirable kinds of *Calceolarias* should now be struck, and seeds of selected kinds sown, for next summer's flowering. Examine the compost ground, and have the deficiencies made up. Peat soil and loam should be procured during summer, without these little can be done in plant-growing. They should be laid up in stacks and covered on the top with reeds to keep off the soaking rains. The various kinds of manures in a decomposing state should be turned to freshen and sweeten. Always have a supply of these kept in a dry shed, never on any account use the soil in a wet state for potting; the procuring and preparing of soil is a primary and important point in the cultivation of exotic plants. Attend to the *Japan Lilies*; they will now be coming into bloom, and nothing at this season can surpass them.

STOVE.

Successions of *Brugmansias*, *Clerodendrons*, *Enphorbias*, *Poinsettias*, &c., should receive a last shift directly in order to provide a rich autumn display in the conservatory. Climbers on ornamental trellises should be occasionally cut back in order to have a succession late in the season when flowers become scarce. Those who have been mindful of such requirements will have a succession of young plants in course of preparation. A batch of such plants as *Thunbergias*, *Ipo-meas*, *Pergularias*, *Jasminums*, *Stephanotis*, and *Passifloras* should be brought on to cover ornamental trellises without delay. *Clematis bicolor* and *C. azurea grandiflora* may be forced in early spring, may rest behind a shady wall in June and July, and will flower again in October and November. The latter plants, although perfectly hardy, are well adapted for trellises in the conservatory. Continue to top-up late growths of *Orchids*, and to keep the plants at the warmest end of the house. Give air most liberally in the early part of the day, and on very fine mornings. Syringe occasionally the whole of the stock as early as seven o'clock. A little fire must be kept up, if only to insure a proper circulation of air; take care, however, that it is very low during the night.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

THE weather during the week has been very favourable for hoeing up weeds, of which no sooner is one young crop despatched, than after a good shower another appears. The dry days furnished also a good opportunity for taking up the earliest *Potatoes*, separating them into lots, the best for table use, and the middle-sized sound samples to be well dried and then stored thinly for seed. Such ground will be prepared without delay for two sowings of *Spinach* and *Onions*—the one directly, the other a fortnight or three weeks hence.

We hardly know how gardeners manage who sow no *Onions* in the autumn, as they must be badly off for large *Onions* from the time when the old ones are too far gone until the spring-sown ones come in. We generally find that autumn-sown *Onions* do best when transplanted about March; but the other day we saw a piece quite as good, or rather better than ours, that had been sown, thinned, and allowed to bulb where sown, which is so far a saving of labour. We also saw at another place a fine piece of *White Beet*, which would be most useful if it could be made the fashion to use it generally as brought to table at that place—the crisp tender leaves dressed as *Spinach*, and the white succulent midribs of the leaves cooked and used in the same way as *Sea-kale*. We have sown it often, but gave up growing it because it was not used. This vegetable in both ways would afford a change, as well as a relief to the garden as respects other crops.

Sowed for the second time *Cabbage*, *Lettuces*, *Endive*, *Car-*

rots to be drawn young. *Onions* for salads to precede those intended to stand the winter, *Cucumbers* for late use, &c.

Planted vegetables of all kinds, and fresh regulated a piece of *Cauliflower* planted about three weeks ago. On looking over them nearly one half of the plants wanted the centre, from which alone the head would come. Planted a bed of strong *Leeks*, in rich soil. The digging-down of a *Strawberry-quarter* has given a good opportunity for finding room for more winter stuff, *Celery*, *Turnips*, &c.; and after this sowing of the latter we shall make a small sowing towards the end of the month to stand the winter. Drew with a string some *Currant* and *Gooseberry* bushes rather closer together, in order that we might plant young *Greens* closely between the rows. Where ground is scarce for what is wanted, it is rarely that a yard of it can long remain uncropped.

As an example, we may state that our earliest out-of-door *Peas* were planted out on a border that had been cropped all the winter with *Tunip*s. The *Peas* were planted in rows 3½ feet apart, and did very well; between the rows were sown a row of *Spinach* and two rows of *Radishes*. As these became too old for use they were pulled up and laid by the side of the *Peas* as mulching. When the *Peas* were past their best, the ground between them was dug over again, and *Peas* sown in the spaces between, and when the first *Peas* had ceased to produce, the sticks were taken from them and put to those last sown; the space where the first *Peas* stood was then dug over, and in each space two rows of *Spinach* were sown, which will be useful before the *Winter Spinach* comes in. The late rains have benefited the late *Peas*, so that they exhibit little appearance of mildew.

Cucumbers.—We alluded to our want of a good ridge *Cucumber* last week, and among others to whom we are glad to express our thanks, we have received some seeds from Mr. Thomas Eads, who recommends *Payne's Long Ridge*, which he grew last year "17 inches long, and of good quality, with the aid of a hand-light, and without any manure or heating material of any kind." Mr. Eads also states that this *Cucumber* has received a certificate from the Royal Horticultural Society. We trust that those interested will make a note of the matter, as the quality as to size of ridge *Cucumbers* has been much complained of lately. Even those grown so freely about *Sandy*, and the market gardeners in that direction, by sowing in the open ground, though crisp when young, are too short to be pleasing to the eye.

We have never seen better *Cucumbers* than were produced by a cottager twenty years ago. He used to sow the seeds, three or four in a pot, on the 1st of May, place them near the fireplace, generally the chimney-piece, until the seeds were well up, and then took them to his window during the day, and placed them on a table at night. Meanwhile, he took a trench out in the garden, and filled that with trimmings of walks, *Cabbage* and other stalks, and all the long grass and weeds that could be had, which when covered with earth just produced a little heat. At first every potful when turned out was covered with a box about 15 inches square, having on the top a moveable lid formed of strong oiled paper.

FRUIT GARDEN.

Went on summer-pruning fruit trees, on the principles previously referred to. Found some places where *ants* were threatening to be troublesome. Not having any guano, we gave a good watering with strong lime and soot water, which they equally detest. In fact, dry quicklime, and strong lime water will make them decamp. When very troublesome, it is a good plan to syringe the trees heavily with clear soot and lime water, which will bring them to the bottom of the wall, and they will try the soil for shelter. When this is done a band of a mixture of tar and oil, 3 inches wide, along the foot of the wall, will prevent their again ascending. The oil will prevent the tar hardening. This is a good plan to protect *Apricots* ripening, and will also secure them from *woodlice*, and the *earwigs* that are wingless, and it is not often that even those with wings will use them to reach the fruit. This mixture, however, must be used only on outside walls, or where, in a house, there is plenty of air night and day. In a house shut up the fumes from the tar would be dangerous. Where *woodlice* are numerous in old walls, after such a syringing it is a good plan to place small pots along the bottom of the wall, with a little dry moss or hay in, and into these they will gladly run, as to a harbour of refuge, and may thus be collected in myriads. *Earwigs* may be thinned in the same way, and if any are left on the wall they may be enticed into any hollow stalks of vegetables—the *Bean* stalk being, perhaps, the most at-

tractive—merely sticking them in 8 or 12-inch lengths among the branches of the tree, and blowing out the insects into water in the morning.

For the first time this season we have had some plants in orchard-houses attacked with the *red spider*. As these plants were mostly small we washed them with a brush and soft-soap water. The back wall also showed a leaf here and there affected, and knowing how soon the insect spreads, we dabbed a paint of soft soap and sulphur on the few open spaces we could get the brush at. We regret that we did not do this earlier, before the leaves of the young shoots covered all the space. The fruit was too far advanced to use soap water for syringing, which when clear, made on purpose, and not too strong, is an excellent remedy for the red spider, shutting the insects up, as it were, and preventing their free movement. A fortnight ago, as soon as a leaf showed the mark of a red spider, the earliest house was lashed with sulphur-lime water, and that, if it will not destroy all the insects, will keep them in check so as to do little or no injury until the fruit is gathered. We are giving two or three washings a-week to the later house, but have left off such washings in the earliest, as after the fruit was freely swelling, we should be afraid it might leave a mark. We have never seen any bad effects of such a wash on Peaches and Nectarines when used before the second swelling, even though the liquid have a milk-like whiteness when used, as that all disappears as it dries; but we may repeat what we have more than once stated, that such liquid is injurious to Strawberries in forcing-houses, arresting their swelling, &c.

We may here repeat how the liquid is made. One pound of quicklime and 1 lb. of flowers of sulphur are mixed together in a gallon of water, in a stout kettle. The mixture is made to boil for ten minutes or so, stirring all the time, and taking care that none runs over. When all is settled in the pot and cool, pour off the clear brown-looking liquid into a large earthenware bottle or other receptacle, and you may boil again if you please, though the second liquor will not be of half the strength. The liquid from the first boiling must be used very sparingly. Less than half a quart will do for a common garden-pot full of water. We generally use three-parts of an English pint to thirty gallons of water. Even at that strength if the house is shut up after syringing, the liquid will give out a strong sulphurous scent for the whole evening.

Proceeded with layering Strawberry plants, syringing those pricked out for potting, and giving vineries, &c., the necessary attention. What we could hardly have credited, we find that good-sized fat sparrows and many smaller birds can make free egress and ingress through one-inch-mesh cord netting. They have almost cleared off a fine lot of Black Tartarian Cherry before we found them out. Well, they have a right to a share. We destroyed more than five dozen of tomtits in the spring, but now every morning we see them hunting over Peach and other trees in the hope of finding a stray green fly to repay them for their labour.

Not long since we saw a number of starlings and water wag-tails in a heap, as a proof of prowess and successful gun-practice. Both are sure friends to man, and ought ever to be treated as co-workers in securing his best interests.

ORNAMENTAL DEPARTMENT.

Oh, for a little more sun to make the flower-beds look bright and sparkling! There is as yet, owing to the rains, a shadowy dullness over the beds that nothing will dissipate except a bright sun. The fields, too, loaded with grain, want a bright sun to give the ears a bright hue. An old first-rate farmer said the other day, "A day of bright sunshine just now is worth a million of money to the country." In a utilitarian point of view we can lay no such claim to our flower-beds, but we feel it to be one of the elements of true happiness to be able to look on the bright side of all things, and if they are not so bright as we would like, then we will anticipate the brightness, and in our mind's eye survey them as we would wish to see them.

In the dry days used the hand-machine on the lawn, to give it the short soft feel of a Turkey carpet; trimmed beds, removing a good many of the largest leaves of Scarlet Pelargoniums to give more light and strength to the flower-trusses; and it is amazing what a little handling and picking thus does in lightening up a bed, especially if a bright day or two, as we expect, come after it. Secured the straight lines of ribbon-borders, and for this purpose nothing answers better than a few straight sticks connected with very small though stout cord, which, after a day or two, is inconspicuous, though serving its allotted purpose admirably, doing away pretty well with all necessity for future nipping and training, if due attention has previously

been bestowed on the natural heights of the plants. In some cases, as in a back row of *Gladious* mixed with *Salvia fulgens*, two strings have been requisite to keep the fine spikes of the former in their allotted space, and the *Salvia* is showing bloom to succeed them when the first blaze is over.

As respects ourselves, there is nothing in the flower garden that absolutely takes the shine off the picture, except the way in which the *rabbits* have used our *Lobelias*, *Verbenas*, and the purple-leaved *Oxalis*. The latter was splendid last year. We have a row between yellow-variegated *Arabis* and dwarf yellow *Calceolaria*, and the effect would have been fine if the *Oxalis* could get much above the ground. We have almost succeeded in freeing the pleasure grounds from rabbits. However, there are still enough left after all our efforts to destroy or expel them to do all the mischief referred to, though nothing in comparison to what they did last year. Many places are deprived of their completeness from want of the wreath of blue which they would have had from our good plants of *Lobelia*, but for the rabbits eating them down almost every night. A mowing machine or a scythe could hardly have stumped them better.

This allusion will do good if the proprietors of gardens become convinced, that the results of allowing rabbits to find their way into their pleasure grounds cannot be counteracted until a long time has elapsed, if there is plenty of cover in which they can squat and burrow. Our last hunt gave us only one rabbit for our trouble, but the next night too truly told us that there were others that could not be moved. When pressed hard they will not move until you are quite upon them. This year fruit trees and bushes are much as usual, and we have the pleasure of looking on luxuriant quarters of Peas covered from base to top. Last year the fruit trees in April were like skeletons, and it was of no use putting out Peas, unless they had previously grown at least 4 inches in height. We have strong hopes that next season, if there are not rich wreaths of blue *Lobelia*, it will be as much the fault of the gardener as the rabbits. If fine flower-beds are wanted, and rabbits are to be protected in the same place, then as the result of experience, and wishing to make the most of circumstances, we say decidedly, Let the gardener complete his proposed arrangements without enlisting in his service *Lobelias*, *Verbenas*, or even the purple-leaved *Oxalis*.

Beside this chief attention to making the beds airy and gay, something was done in fresh arranging plant-houses, turning out most of the *Pelargoniums*, and supplying with *Fuchsias*, *Coleus*, *Balsams*, and other plants, packing afresh *Orchids*, shifting *Balsams*, pricking off *Primulas*, *Cinerarias*, &c., and sowing herbaceous *Calceolarias*. Many modes may be resorted to in doing the last, but few modes will answer better than the following:—Set in a shady place either one or more hand-lights, or a single-light frame. Place in it 2 or 3 inches of coal ashes on which to set the pots, or half plunge them. Prepare the pots by filling them half full of drainage, then put in a layer of rough compost, then finer, and then the finest of sandy loam and a little peat to within 1 inch of the rim; water well, allow the pots to drain for a day, scatter a little light soil on the surface, and on this sow the seeds. Sprinkle over the seeds a little silver sand as thinly as possible, press down slightly, put a square of glass over the pot, and cover with thick dark paper before the little seedlings show themselves. When the surface of the soil becomes rather dry water not that, but the bed of ashes, &c., and there will be moisture enough without any risk of washing away the small seeds, or causing the young seedlings to damp-off and disappear.—R. F.

COVENT GARDEN MARKET.—AUGUST 7.

LARGE importations from the Continent continue to come in; but our own produce is not so freely offered this week, the soft fruit falling off and giving place to Peas and Apples, and Plums. There are also large arrivals of Potatoes, and prices are much lower; the quality, too, is good.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	to	1 6	Melons..... each	3	0	to	5 0
Apricots doz	3	0	4	0	Nectarines doz.	4	0	8	0
Cherries lb.	0	6	1	6	Oranges doz.	100	8	14	0
Chestnuts bush.	0	0	0	0	Peaches doz.	6	0	10	0
Currents..... ½ sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black do.	5	0	6	0	Pine Apples lb.	4	0	0	0
Figs doz.	3	0	6	0	Plums ½ sieve	2	6	5	0
Filberts lb.	1	0	0	0	Quinces doz.	0	0	0	0
Cobs lb.	0	0	0	0	Raspberries lb.	0	0	0	8
Gooseberries .. quart	0	4	0	6	Strawberries lb.	0	6	1	6
Grapes, Hothouse.. lb.	2	0	4	0	Walnuts..... bush.	10	0	20	0
Lemons..... 100	8	12	0	0	Green.... per 100	1	6	2	0

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.		
Artichokes esch	0	3 to 0	6	Leeks bunch	0	3 to 0	0
Asparagus bundle	0	0	0	Lettuce per score	1	0	0
Beans, Kidney, ½ sieve	4	0	0	Mushrooms pottle	2	0	3
Scarlet Run, ½ sieve	4	0	0	Mstd. & Cress, punnet	0	2	6
Beet, Red doz.	2	0	3	Onions per doz. bchs.	5	0	0
Broccoli bundle	2	0	3	Parsley per sieve	3	0	4
Brus. Sprouts ½ sieve	0	0	0	Parsnips doz.	0	9	1
Cabbage doz.	1	0	1	Pears per quart	0	6	1
Capsicums 100	2	0	3	Potatoes bushel	2	0	4
Carrots bunch	0	6	8	Kidney do.	3	0	4
Caniflower doz.	3	0	6	Radishes doz. bunches	0	9	1
Celery bundle	1	0	2	Rhubarb bundle	0	4	0
Cucumbers each	0	4	0	Savoy doz.	0	0	0
pickling doz.	2	0	0	Sea-kale basket	0	0	0
Endive doz.	2	0	0	Shallots lh.	0	8	0
Fennel bunch	0	8	0	Spinach bushel	2	0	3
Garlic lb.	0	8	1	Tomatoes... per doz.	2	0	3
Herbs bunch	0	3	0	Turnips bunch	0	6	0
Horseradish .. bundle	2	6	4	Vegetable Marrows ..	1	0	2

TRADE CATALOGUE RECEIVED.

W. B. Jefferies, Arboretum Nurseries, Ipswich.—*Descriptive Catalogue of Plants, Seeds, Bulbs, &c.*

TO CORRESPONDENTS.

*. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

VARIEGATED BRAMBLE (*A. B. X. F.*).—The variegation in the Bramble, of which you have sent specimens, is not unusual, and this season it seems less so, as we have met with several instances of it.

SEEDLING PELARGONIUM (*W. T. S.*).—Not of sufficient merit.

STRAWBERRIES FOR MARKET (*J. Batty*).—Rifleman is a good bearer; but we should not grow either that or any of the others you mention for market. We should prefer for early produce Keens' Seedling, Sir J. Paxton, and Rivers's Eliza; for later production, Wonderful, Dr. Hogg, and Frogmore Late Pine.

ARACARIA IMBRICATA DECAYING (*An Irish Subscriber*).—The fact of its roots being confined in a basin of clay is quite sufficient to account for the decay. The soil for some distance all round should be loosened and rendered more fertile, and well drained.

VARIEGATED PHLOX (*E. H.*).—As you have had a border of it for four years it is evidently permanent in your soil, and as it is perfectly hardy in rather an exposed situation, it would be useful for some purposes. We presume that it is very dwarf. The leaves have very broad edgings, some of deep yellow, and some of straw colour.

SEEDLING CALCIFOLIA (*H. Walton*).—Presuming that your Calcifolia is one of the herbaceous kinds, it is a very fine variety, having the largest flowers we have seen, very circular, and very showy by reason of their bright yet dark brown and scarlet colour.

WEEDS ON MACHINE-MOWED LAWNS (*S. L.*).—There are no good grounds for the assertion that lawn-mowers cause the grass to deteriorate; but as they cut it much more closely and evenly than the scythe, the weeds are more visible. If you will allow the lawn that used to produce nothing but fine, soft grass to grow as long as when it was under the scythe, you will find the grass as fine and soft as ever.

ROSE LEAVES SPOTTED (*W. R. J.*).—The leaves are severely attacked with the black mildew. Your remedy is to manure liberally and to water copiously, both overhead and at the root, during dry weather. Dust the leaves on both sides, and especially on the under side, with flowers of sulphur, making sure that every part affected, whether on the stems or leaves, is covered with sulphur. The sulphur may remain on a few days, and then be washed off with a solution of soft soap at the rate of 2 ozs to the gallon of water. It may be necessary to repeat the dusting of the leaves and branches with sulphur.

RED SPIDER ON VINES (*S. S.*).—Your Vines that have the Grapes colouring will be injured more or less by the red spider attacking them at this critical period. We advise you to brush the leaves with a soft, new, and unused paint brush. This will destroy numbers of the insects. You should have the hot-water pipes made as hot as it is possible to make them, and on the evening of a hot, calm day the house should be shut up quite closely, and the pipes painted with sulphur brought to the consistency of thin paint by mixing it with 4 ozs. of soft soap to a gallon of water. Every part of the pipes should be painted with the sulphur composition, and two coats should be given. The fumes of the sulphur will kill the red spider, and the better you coat the pipes and the moister you keep them the more destructive will the fumes be to the insect. The house should be opened in the morning before the sun shines powerfully.

The sulphur should not be applied to a red-hot fire, but it may be applied to any surface that is not hotter than the hand can bear for a few seconds.

CYCLAMEN PENSICUM SEEDLINGS (*Calcarea*).—We advise you to pot off the seedlings singly in small pots at the end of this month, and after potting place them in a cold frame. You may, instead, prick them off 2 or 3 inches apart in pans. This ought to have been done twelve months ago.

COVERING A SLOPING BANK (*Cobham*).—The bank may be planted with common Laurels, which, if pegged down, will have a very good effect; or you may, providing there is a tolerable depth of soil, sow now during moist weather a mixture of *Avena davescentis*, 4 lbs. per acre; *Cynosurus cristatus*, 6 lbs.; *Festuca duriuscula*, 6 lbs.; *Festuca ovina*, 4 lbs.; *Festuca rubra*, 4 lbs.; *Festuca tenuifolia*, 4 lbs.; *Poa nemoralis*, 2 lbs.; *Trifolium repens* and *minus*, of each 4 lbs.; *Lotus corniculatus minor*, 2 lbs., and 24 lbs. of *Lolium perenne*. The surface should be made quite level or even, and very fine. After sowing, the ground should be patted with the back of a spade, if rolling is impracticable.

PRIVET ROOTS OCCUPYING A BORDER (*A. B.*).—You cannot grow anything within a few feet of the Privet hedge, nor do we know what will enable you to do so. You may remove the hedge and plant one of Holly, which may be kept very low and close, and its roots are not so troublesome as those of the Privet.

PROPAGATING LITHOSPERMUM FRUTICOSUM (*T. H. D.*).—Cuttings of the half-ripened wood, or the points of the shoots of the current year, having their bases rather firm, trimmed of their lower leaves, and the base of the shoot cut with a sharp knife below a joint, should be inserted half or two-thirds their length in a compost of sandy peat one-third and two-thirds silver sand, the surface of the soil in the cutting-pot being covered with an inch of the last. The pot or pan containing the cuttings should be placed in a cold frame or pit, and kept close, moist, and shaded from the sun until the cuttings are rooted. The sand should not be kept very wet or the cuttings will damp off. The cuttings will strike much sooner if placed in a mild bottom heat.

SCARLET PELARGONIUMS NOT FLOWERING—*Mrs. Pollock Pelargonium* TURNING GREEN (*A Despairing Gardener*).—There are few flower gardens, except in poor, sandy, open soils, where Scarlet Pelargoniums have done very well this season. In a damp atmosphere and in cold soils, with such cold rains, there has been less bloom than usual, so much so, that gardeners speak of depending chiefly on ornamental-foliated plants. We can give no other advice as respects the Pelargoniums than to limit growth, if by nothing else than removing a number of the larger leaves. We have done so, and the effect in relieving and giving more strength to the flower-buds has been good. In most cases of *Mrs. Pollock* returning to the green state, it may be easily traced to rich nourishment and excess of moisture. We would cut off every green part as it appeared, and this will lessen growth and throw more strength into the coloured part. We have only seen one plant as yet throwing up a green zonal leaf, and the shoot was removed at once. If the plant came all that way there would be little chance of the tricolor marking returning.

VINES IN A GREENHOUSE (*Rector, Kent*).—We presume that the Vines in your greenhouse are intended to interfere as little as possible with the plants, and that therefore the temperature will not often be more than that required for the greenhouse. In that case we would advise your planting the Black Hamburgh and the Royal Muscadine in preference to the Chasselas Musque; but if the plant of the latter is a favourite transfer it to a large pot, and keep it in the house, and you may expect it to bear in the second season. If resolved to add the two Vines, the sooner they are planted the better, as they would make fresh roots before winter. If the four-foot border is very full of roots it would be as well to defer planting until the fruit was cut, but plant a few early in autumn as that was done. The best way of planting would be to take out a space a yard wide as far from the present plants as possible, taking care of the fibres of the established plants, and fill the space, at least to the depth of 2 feet, with fresh soil, and in that pack the roots of the new Vines, from 6 to 9 inches from the surface, and protect from frost and heavy rains during the winter. We are presuming that you allow the four-foot border to remain as it is. Such a border for so narrow a house will grow good Grapes, provided you cut the roots near the surface with rich dressings every year, or even mulchings all the summer. Such a border even now would be the better of a hundredweight of superphosphate of lime, to be followed with some good dung; and as the border, though deep, is well drained, we would be disposed to try such a mode for a season or two. If, however, you are sure that the bulk of the roots are 3 or 4 feet deep, and resolve on raising the roots and increasing the border to at least double its width, then we would defer planting until autumn, raise the roots carefully, plant in fresh material not more than from 6 to 9 inches from the surface, and mulch and protect in winter.

MUSHROOMS IN A CELLAR (*E. B.*).—We could not wish to have a place more suitable for the purpose than your cellar. Under ordinary circumstances six weeks after spawning is time enough for the Mushrooms to show. We have known them do so in half that time, as yours seem to have done, at least in four weeks; but the beds rarely continue to bear so long when they are pushed on so fast at first—in fact, the spawn is made to push through the soil at once, instead of taking a good hold by running through the bed. Your having in six weeks eight or ten Mushrooms the size of a five-shilling piece, shows there is nothing much wrong. That the others do not grow on may, as you infer, be from dryness, and more especially as in the adjoining cellar, with an open doorway between, there is a fire kept burning. This fire would be of great assistance in the winter months, but we would rather be without it in summer; and if a temporary door could not easily be put up, we would hang a mat over the opening, and keep the mat wet rather than dry. This, and a little sprinkling of hay over the bed, would secure moisture without much watering. We often advise this, because watering in such a case is so frequently overdone as to injure, if not destroy the spawn, which rejoices in the happy medium between wet and dry. We would advise, therefore, as follows:—Examine the bed, and if it is dry merely on the surface, damp it several mornings running by pouring a little water from the spout of a small pot over the places where there are no small Mushrooms. Syringes also the walls of the cellar, and keep the floor moist; attention to these points will generally be sufficient. Turn up, however, several bits of the bed, at a distance from each other, with the finger or a pointed stick, doing this without much disturbing the surface. If you find this so dry as to be crumbly, and that it will not permit of being squeezed together into a ball, then it is overdry, and your best mode of proceeding

will be to pour water, at 75°, at back and front of the bed, where it is likely to be the driest, and then make little holes with a pointed stick over the bed in the open places, so as to let the water down, giving a little two or three days consecutively. A close, moist atmosphere is favourable to the production of Mushrooms, and the damping of the floor and walls, and partly blocking the doorway at present, will most likely be sufficient. We would go on putting up other beds in the cellar as you propose, chiefly for having successions at present. As the nights become colder the fresh beds will help the other beds by their increased temperature before spawning. Consult "Doings of the Last Week," published in our number for July 26th.

LIFTING VINES—BORDER-MAKING (Amateur).—You should have referred us to the page in which former replies appeared; it is impossible for us to keep each individual correspondent's case in mind. Now, as to the present inquiry. If the Vines, with bare stems in the ground, destitute of fibres and deep in the soil, are old, it would be better to remove them and plant fresh than to raise and bring the roots nearer the surface. The six young Vines planted this season and doing well, may either remain or will be easily raised and replanted if you make a fresh border. The description of the subsoil shows that in natural circumstances drainage is wholly unnecessary, but still we would allow the drain to remain. With such a subsoil we see no reason for concreting, layers of rubble at the bottom, or much trouble at all, provided you can keep the roots near the surface with surface-manuring. As the border is already almost all above the surrounding level, we question if a little fresh soil and annual top-dressings would not be ample for securing good Grapes. The only danger is, that from neglecting the surface of the border the roots of the Vines should be, even in the search after moisture, induced to descend into the subsoil of sand and stones, and there be unmanageable. But for this we see no reason for making a bottom for the Vine border according to the "most approved modes;" but if there is this danger, then at 3 feet from the surface we would incorporate about one-fifth part of quicklime with five parts of the sandstone and gravel, and lay down 4 inches of concrete, rolling it hard, allow this to set firm, and sloping to the drain, and on that place 6 or 8 inches of rough rubble, the finest on the surface, and then the soil for the border, placing turf reversed over the surface of the rubble. The soil from the grass field will do very well; but we would not take it above 2 or 3 inches deep unless we were under the necessity for going deeper, as the nearer the surface the richer and the better stored with fibre. For such soil as you describe we would use little else, except a barrowload of lime rubbish, rough, to every ten barrowloads or so of loam, and about a barrowload of broken boiled bones to every thirty barrowloads of the soil. You can easily top-dress afterwards. It matters not much whether or not such a border is made at once; but as you have the "Vine Manual" for the reasons there given we prefer making the border at several times, say at first from 3 to 4 feet wide, which would do for a year or two, and then adding 2 or 3 feet more. We could not do better than refer to the instructions given in the "Vine Manual" as to transplanting and border-making.

SPRING-PLANTING A TOWN FLOWER GARDEN (An Ignorant Amateur).—We hardly know how to advise you as to securing a display in a town garden early in spring, where Snowdrops, Anemones, Jonquils, Narcissus, and even Winter Aconite cannot be made to flourish. We would advise Snowdrops and Aconites to be left with their foliage until this becomes quite yellow, and then cover them with a little rotten dung, as much to mark the place, so as not to be injured by other plants, as for any good the dung will then do to the roots. We would try Crocuses and early Tulips, and if these show signs of not flourishing, we would lift and store the bulbs, and plant afresh every year, and so you might do with the Snowdrops if planted early enough. You cannot sow the seeds of double Daisy too soon for a fine display next spring. The seedlings should be pricked out and planted as edgings next season. You might also divide any plants of Baileys now, pricking the smallest bits out about 3 inches apart, and they will make fine plants for next spring. You will

not succeed with Variegated Anemone from seed; but every single bit planted in a border now and up to Christmas, will root and be fit for edgings next spring. This is the best way to treat this, Carnations, &c.; pricked out in autumn they will be fine plants in the spring without hand-lights or anything else. You may cut the Sweet Alyssum as you like, and that and Virginian Stock used to do well in the smokiest parts of London, and both are so hardy that scarcely a seed would fail, and they make excellent edgings. Such plants as Prince's Feather, Love-lies-bleeding, and all the Chinese Chrysanthemums do well in town gardens. We think that your bulbs will be better lifted, owing to the warmth and damp of your winters. If your Sweet Alyssum is likely to become too large before the end of the season, you might sow now, just behind the old plants.

BOOK ON GARDENING (S. Lea).—The "Garden Manual," 1s. 6d., or free by post from our office for 1s. 8d.

VARIOUS (C. R. H.).—From your description we have little doubt you have Kitley's Goliath Strawberry. The flower-buds of Auguste Mée and Smith's Yellow Roses will be apt to damp or fall off in such stiff soil as yours, and in such a season as we have had. The remedy is at least deep moving, planting higher, after lightening the soil, and the Roses will do better than in a light soil. If Scarlet Pelargoniums would not suit you, then scarlet or nearly scarlet Gladiolus, as Gandavensis and varieties would answer; and for yellow, the single Marigold, Tagetes tenuifolia pumila.

MANUAL OF GARDENING (Brierton).—We cannot recommend you anything better for your purpose than "Out Door and In-Door Gardening," which you can have from our office for 1s. 8d. each by post.

DRYING PELARGONIUMS (E. B. H.).—The best way is to dry them between blotting paper. Do not press them too heavily, and change them frequently.

ELTON STRAWBERRY (An Old Subscriber, Dublin).—Strawberries suffer very much from packing and carriage. Those received were in a state of decomposition, but are certainly not the Elton. It is conical not round, and is bristly acid; leafstalks hairy, leaflets roundish, and concave.

WEDDING BOUQUETS (M. L. D.).—These are frequently made of an enormous size, but we would not have them more than 8 inches in diameter, and if we consulted merely our own taste we should prefer them 6 inches across. In the bride's bouquet there should be little but white flowers, but a few Forget-me-nots or Lobelias may be introduced with advantage. White should also prevail in the bridesmaids' bouquets, but flowers of other colours may be more freely employed. By all means introduce sprays of Adiantums or other Ferns.

YELLOW-LEAVED PELARGONIUM (W. H. B., Beckenham).—You should submit your variety to the Floral Committee of the Royal Horticultural Society. If you mean the article which appeared in page 33, you will, on again referring to it, find that flowers, not leaves, were spoken of.

NAME OF INSECT (W. Y. M.).—Your insect is the Sirex gigas (female) the larva of which does considerable damage to Larches by boring round holes in the wood. The long tail-like appendage is used not as a sting, but for boring into the wood in order to deposit the eggs.—W.

NAMES OF PLANTS (Veritas).—Trifolium procumbens. (W. T. S.).—Chlora perfoliata. (James).—1, Pimelea glauca; 3, Erica jasminifolia; 4, Erica aristata; 5, Erica Aitonia; 6, Erica costata, var. (Tweedside).—Lanaria vulgaris (H. M.).—Cassia occidentalis. (J. Boyd).—The Fern being without fructification cannot be determined. (A Constant Reader).—1, Phalaris arundinacea colorata; 2, Verbascum thapsus; 3, Asplenium laserpitillifolium; 4, Abutilon striatum; 5, Hypericum calycinum. (P. O.).—1, Pteris scaberula; 2, Asplenium cicutarium. (W. Hallett).—Ferns: 1, Polypodium pustulatum; 2, Adiantum capillus-Veneris; 3, Blechnum occidentale; 4, Cystopteris fragilis; 5, Polystichum angulare. Selaginellas: 1, Selaginella cesia; 2, S. Kraussiana; 3, S. pubescens; 4 and 5, S. Martensii; 6, S. cuspidata.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending August 6th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 31	29.978	29.945	72	43	61	59	N.E.	.00	Fine, slight haze; fine throughout.
Thurs. 1	29.982	29.934	62	49	62	60	N.E.	.00	Dry wind; overcast and cold; overcast at night.
Fri. . 2	29.992	29.962	57	36	62	60	N.E.	.00	Overcast; cold; very fine at night.
Sat. . 3	30.020	30.019	73	48	60	59	N.	.00	Overcast; fine; cloudy and warm.
Sun. . 4	29.992	29.936	76	45	61	58	S.W.	.00	Very fine; fine; cloudy; fine.
Mon. . 5	29.995	29.897	73	41	62	59	S.W.	.32	Very fine; fine; densely overcast; rain.
Tues. . 6	29.935	29.717	66	44	61	60	S.	.39	Rain; constant rain; fine.
Mean	29.984	29.915	68.43	43.71	61.28	59.28	..	0.71	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

POULTRY PRODUCE.

I SEND you my poultry account for the present year from January to June. I keep my fowls in two small pens, and let them out on a grass plot for about an hour every day. I have at present twenty-two hens and two cocks; of the latter one is Spanish and the other a Golden-spangled Hamburg. The hens are—Spanish, 7; Golden-spangled Hamburgs, 3; Game, 1; Cochon-China, 1; Cross-bred, 10. Three of the Spanish hens I obtained in July and one in June. I sold three White Cochon-China hens on April 6th.

The monthly production of eggs was:—

	Eggs.		Eggs.
January	76	May	189
February	153	June	157
March	258		
April	210	Total	1003

Receipts	£ s. d.
Expenses	4 4 4
	3 1 6

Profit.....£1 2 10

—COCKEREL.

IPSWICH POULTRY SHOW.—This is entitled to the special support of all poultry exhibitors. The prize list is very liberal; there are eight silver cups. The Great Eastern Railway will

convey back free from charge all specimens if remaining the property of the exhibitor. Other railway companies will, if requested, convey the specimens at parcel rate, if not over five hundred miles; and the pens, called "Ipswich Improved," are so excellent that the Royal Agricultural Society hired them for their recent Exhibition at Bury St. Edmunds.

DEWSBURY POULTRY SHOW.

THE Committee of the Dewsbury Poultry Exhibition deserve the highest praise for the excellence of their arrangements and the manner in which they have endeavoured to meet the wishes of both exhibitors and visitors. At the Show on the 2nd inst. the poultry pens were arranged without exception in a single tier, under the protection of a tent, 78 yards long by nearly 20 yards in width. This accommodation afforded every desirable convenience for both the birds themselves and a large and fashionable company, the weather proving of a most favourable character. Although as a natural consequence of the moulting season, there were many birds in deep moult, the generality proved in far better feather than most persons would have anticipated. We regretted to see a few pens sent suffering severely from roup, but very properly they were instantly removed by order of the Managers of the Show. It is an absolute injustice to owners of birds in perfect health for any exhibitor to knowingly forward to an exhibition poultry in such a condition, for however much this matter may in times back have been denied, there cannot in the present day be a doubt that roup is by far the most contagious disease with which poultry can be affected. This complaint, too, is usually so apparent, that owners can scarcely fail to be aware of it on even a very cursory inspection, nor are they justified in carelessly spreading so serious an infection, even under the plea of hoping to win a prize, or having such fowls "claimed" by the uninitiated.

The *Cochins* were mostly good, and many of the chickens were especially promising. The *Spanish* fowls were not less praiseworthy, but several pens had been by far too frequently exhibited; in fact, had been "higgled" from show to show until they appeared to lack constitution altogether. This is mistaken policy, as invariably they are thus also materially injured for the following breeding season. The *Grey Dorking* chickens were mostly excellent; the adult class was, however, a failure. The best pen in this class (admitted to be most excellent), was thrown out completely by misadventure. The cock, though perfectly well it is said when packed, was so paralysed as not to be able to stand for more than a few seconds at a time, and shook like a person affected with a severe ague. It might possibly have arisen from fright or excitement on the railway, but although this class was left by the Arbitrator till all the other prizes were awarded, not the slightest improvement was apparent. We would advise perfect quiet on a retired grass run, away from all other fowls as the only probable restorative, and as the bird is evidently of great value, it is worth the trial. The *Game* fowls were excellent, but many were out of feather. *Polands* likewise were most excellent, the Blacks being unexceptionable. In *Hamburghs*, a pen of Black chickens was well worthy of especial mention. Both Black and White *Bantams* were well shown, and a few pens of very good *Game Bantams* were in competition.

The *Pigeons* were so unusually good throughout as to cause much interest; in fact, many birds were brought by their owners from even beyond London, and, as a result, a large amount of "betting" in considerable sums prevailed. Much as we admire the strongest feelings of emulation among exhibitors, our opinion is adverse to betting, as the inevitable result is a keener disappointment to the unsuccessful, combined with exultation on the part of winners that provokes a severance of social regard. For these and other cogent reasons it is best altogether avoided.

COCHIN-CHINA.—First, C. W. Brierley, Middleton. Second, H. Beldon. Goitstock. Commended, C. Sidgwick, Keighley; W. A. Taylor, Manchester. *Chickens*.—First, W. A. Taylor. Second, C. Sidgwick. Highly Commended, H. Beldon; H. W. Hlingworth, Idle, Leeds. Commended, Miss Kitson, Milnthorpe, Wakefield.

SPANISH.—First, Messrs. Burch & Boulter, Sheffield. Second, J. Thresh, Bradford. *Chickens*.—First, M. Farrand, Dalton. Second, H. Beldon. Commended, Messrs. Burch & Boulter.

DORKINGS.—*Chickens*.—First, E. Leech, Rochdale. Second, J. Stott, Holey, Rochdale. Commended, H. Beldon; H. Pickles, jun., Skipton.

BRAHMA POOTNAS.—First, H. Lacy, Hebden Bridge. Second, H. Beldon. Commended, E. Leech. *Chickens*.—First, H. Lacy. Second, H. Beldon. Highly Commended, M. Scott, Idle, Leeds.

GAME (Black Red).—First, C. W. Brierley. Second, J. D. Newsome. Batley. *Chickens*.—First, J. Fell, Adwalton. Second, J. Firth, Halifax. Highly Commended, J. D. Newsome, Batley.

GAME (Brown Red).—First, C. W. Brierley. Second, R. Pashley, Worsop. Highly Commended, W. M. Marriott, Dewsbury. *Chickens*.—First, W. M. Marriott. Second, T. Saddick, Bradford.

GAME (Duckwings, and other Greys and Blues).—First, W. Fell. Second, J. D. Newsome. Commended, T. Dyson, Halifax. *Chickens*.—First, J. Fell. Second, R. Pashley. Commended, W. Fell.

GAME (Any other variety).—First, C. W. Brierley. Second, T. Hartley, Gomersal. Commended, H. C. Mason, Brighlington. *Chickens*.—Prize, W. Walker.

HAMBURGHS (Gold or Silver-spangled).—First, H. Beldon. Second, T. C. & E. Newbitt, Epworth. Highly Commended, H. Beldon; J. White; Netherton, Wakefield. Commended, H. Pickles, jun. *Chickens*.—First, H. Pickles, jun. Second, H. Beldon. Commended, F. Nichols, Wortley.

HAMBURGHS (Gold or Silver-pencilled).—First and Second, H. Beldon. Commended, H. Pickles, jun. *Chickens*.—First, H. Beldon. Second, H. Pickles, jun.

HAMBURGHS (Black).—First, H. Beldon. Second, C. Sidgwick. *Chickens*.—Prize, C. Sidgwick.

POLANDS (Gold or Silver-spangled).—First and Second, H. Beldon. *Chickens*.—First, H. Beldon. Second, Miss E. Proctor, Hull.

POLANDS (Any other variety).—Prize, H. Beldon (White-crested Black). *BANTAMS (Black).*—First, Miss G. Ridgway, Dewsbury. Second, T. Burgess, Brighouse. Commended, S. S. Mossop, Long Sutton; W. A. Taylor, Manchester; J. R. Jessop, Hull.

BANTAMS (White).—First, J. R. Jessop. Second, W. A. Taylor. *GAME BANTAMS.*—First, G. R. Davis, Knutsford. Second, J. D. Newsome. Highly Commended, T. Dyson, Halifax; W. F. Eatwile, Leeds.

ANY BIRD NOT MENTIONED IN THE ABOVE CLASSES.—First, T. Burgess, Second, Col. Stuart Wortley, London (Creve Coeurs). Highly Commended, Col. Stuart Wortley (La Fleche). Commended, R. Pashley (La Fleche).

GAME (Any variety).—*Cock*.—First, C. W. Brierley. Second, J. Hodgson. Commended, Rev. A. G. Brooke, Rayton XI. Towns. *Hen*.—First, C. Mason. Second, C. W. Brierley.

ANY VARIETY EXCEPT GAME.—*Cock*.—First, W. A. Taylor. Second, H. Beldon. Highly Commended, C. W. Brierley. *Hen*.—First, H. Beldon. Second, C. W. Brierley. Highly Commended, Miss G. Ridgway; M. Farrand; J. White, Netherton; J. Thresh, Bradford (Spanish).

DUCKS (White).—First and Second, M. Farrand. Highly Commended, E. Leech.

DUCKS (Rouen).—First, E. Leech. Second, C. Sidgwick.

DUCKS (Any other variety).—Prize, C. W. Brierley.

RABBIT.—*Long-eared Back.*—First, W. Newsome. Second, A. H. Easton, Hull. Highly Commended, M. Millington, York. *Doe*.—First, Messrs. Hanson & Wagstaff, Thorne. Second, C. Grail, jun., Thorne. *Colour*.—First, W. Newsome. Second, Messrs. Hanson & Wagstaff. *Weight*.—First, Messrs. Hanson & Wagstaff. Second, J. Clarke, Leeds.

PIGEONS.

The fine show of *Pigeons* was mainly brought together by the increased prize list, and by the unceasing exertions of Mr. J. Frith, jun., the Hon. Treasurer, an enthusiastic fancier. It comprised most of the crack birds in England, and formed a most attractive feature in the Exhibition. At a local show we seldom recollect more care being taken of the various specimens sent for competition, and we have no doubt the result will be increased confidence on the part of exhibitors. In the class for single Pouter cocks, the first prize was awarded to a fine Black of exquisite shape, and shown in capital trim. A very lengthy Blue was second, but the bird was quite out of condition and showed to great disadvantage. The class contained several other good birds. In that for hens, very good Blues had both prizes. The classes for Carriers, single cocks and single hens, formed a splendid collection, the competition being very severe. Mr. Crossley's wonderful Black, however, secured the premier position. The same exhibitor, also, was first with his well-known hen of the same colour. A fine young Black hen shown by Mr. Fulton was second. Some capital Duns were also shown. The Almond Tamblers were a very pretty lot, nearly every pen being worthy of a first position. In Tamblers, any other variety, the prizes went to good Black Mottles and Kites. Barbs were numerous and excellent. An evenly-matched and good pair of Red was first, and Black second. Several capital pens of Yellow were also, shown, but with the drawback of odd eyes in nearly every pen. Turbits and Jacobins were average birds, Reds taking the first positions, Point-crowned Turbits winning. Trumpeters were only a small class, but what they lacked in numbers was made up in quality. The two prize pens were really first-class representatives, and Mr. Horner may well be proud of their possession. They are Black Mottles, such as we have not seen since the exhibition days of Mr. Newburn, from whose strain we understand they are directly descended. Owls were well represented, the foreigners as usual winning. Whites were first, Blacks second, Blues and Whites receiving notice. Fantails were good, though showing traces of recent exhibition. Plain-headed birds won. The other classes do not call for especial notice. In the variety class, the prizes went to German Toys.

POUTER.—*Cock*.—First, R. Fulton. Second, F. Crossley, Elland. Highly Commended, C. Cowburn, Calfs, Leeds; R. Fulton. *Hen*.—First, R. Fulton. Second, J. Hawley, Bingley. Highly Commended, F. Crossley; J. Thackray, York.

CARRIER.—*Cock*.—First, F. Crossley. Second, J. Hawley. Highly Commended, H. Yardley, Market Hall, Birmingham; R. Fulton. *Hen*.—First, F. Crossley. Second, R. Fulton. Highly Commended, J. Hawley; E. E. M. Roys, Rochdale; R. Fulton; J. Thackray.

TUMBLERS (Almond).—First, J. Thackray. Second, J. Percivall, Harrogate. Highly Commended, J. Fielding, jun., Rochdale; F. Crossley; R. Fulton.

TUMBLERS (Any other variety).—First, J. Hawley (Mottled). Second, R. Fulton (Agate Mottles). Highly Commended, J. Percivall (Red); H. Yardley; R. Fulton (Agate Mottles); J. Thackray.

TURBITS.—First, H. W. Hlingworth. Second, T. C. & E. Newbitt. Highly Commended, E. Horner; H. Yardley.

BARBS.—First, E. Horner. Second, J. Thackray. Highly Commended, J. Bromley, Tooge Moor; E. Horner; H. Yardley; R. Fulton; J. Thackray, York.

JACOBINS.—First, E. Horner. Second, J. Thompson.

TRUMPETERS.—First and Second, E. Horner, Harwell. Highly Commended, C. Grail, jun., Thorne.

OWLS.—First, J. Fielding, jun. Second, F. Crossley. Highly Commended, J. Thompson.

FANTAILS.—First, H. Yardley. Second, J. Hawley. Highly Commended; E. Horner.

NUSS.—First, J. Thompson. Second, Rev. A. G. Brooke. Highly Commended, J. Thackray.

DRAOONS.—First, F. Crossley. Second, J. Thompson. Highly Commended, J. Thackray.

COMMON.—First, T. Watson, Thornhill. J. A. Barratt, Dewsbury.
ANY OTHER VARIETY.—First, H. Yardley. Second, J. Thackray (Magpies). Highly Commended, J. Percival; E. E. M. Roysds.

The Judges were—for Poultry, E. Hewitt, Esq., of Birmingham; and for Pigeons, T. Charlton, Esq., of Chapelthorpe.

HIGHLAND AND AGRICULTURAL SOCIETY'S SHOW.

THE following prizes were awarded for Poultry at this Society's Show, which opened at Glasgow on the 30th of July.

DORKINGS (Silver-Grey).—First, D. Annan, Torr of Monzie, Cupar-Fife. Second, T. Raines, Bridgehangh, Stirling. Commended, H. Heys, Springfield House, Barrhead. *Chickens*.—First, T. Raines. Second, Lord Binning, Millerstain, Kelso. Commended, H. Heys.

DORKINGS (Coloured).—First, J. McCallum, Crieff. Second, J. Allan, Crieffwechter, Crieff. *Chickens*.—First, J. McCallum. Second, T. Raines. Commended, J. Allan.

DORKINGS (White).—First, J. Aitken, Paisley. Second, J. Sharp, Johnstone, Renfrew.

COCHIN-CHINA (Coloured).—First and Second, J. Stuart, Thistlebank, Helensburgh. *Chickens*.—First, J. Stuart. Second, W. Ford, Hardegreen, Dalkeith. Commended, J. Stuart.

COCHIN-CHINA (White).—First, Miss Biggar, Braes House, Ecclefechan. Second, J. Stuart, Helensburgh. *Chickens*.—First, Miss Biggar. Second, W. Ford.

BRABHA POOTUA (Pencilled).—First, T. Raines. Second, D. Annan. Commended, J. Stuart. *Chickens*.—First, J. Stuart. Second, G. Muirhead, Durdie, Errol. Commended, J. Stuart.

BRABHA POOTUA (Light).—*Chickens*.—Prize, G. Muirhead.

SPANISH.—Prize, J. Dunlop, Paisley. *Chickens*.—First and Second, J. Dunlop.

SCOTCH-GREY.—First, A. Grant, Kilbarchan. Second, W. Park, Parkhead. Commended, S. Young, Neilston. *Chickens*.—First, R. Macnab, Cardonald, Govan. Second, W. M. Gilmour, Shawburn, Hamilton. Commended, S. Young.

HAMBURGH (Golden-pencilled).—First, J. Mitchell, Paisley. Second, J. Lindsay, Thornhill, Stowarton. Commended, J. Monburgh, Paisley. *Chickens*.—Prize, J. Mitchell.

HAMBURGH (Silver-pencilled).—First, J. Lindsay. Second, A. Glendinning, Strathblane. Commended, J. Logan, Eastfield, Carnwath.

HAMBURGH (Golden-spangled).—First, T. Bruce, Busby. Second, H. Currie, Ardrossan. *Chickens*.—First, H. Currie. Second, T. Bruce.

HAMBURGH (Silver-spangled).—First, A. Glen, Erskine, Bishopston. Second, J. Stewart, South Arthurlie, Barrhead. *Chickens*.—First, A. Glen. Second, J. Stewart.

POLISH (White-crested Black).—*Chickens*.—Prize, R. McNab, Cardonald, Govan.

POLISH (Golden-spangled).—Prize, W. R. Menzies, Crossmyloof.

GAME (Black or Brown Red).—First, J. H. Macnab. Second, W. D. Dickson, Carroncroft, Thornhill. Commended, J. H. Macnab. *Chickens*.—First and Second, J. H. Macnab.

GAME (Duckwing).—Prize, W. R. Menzies.

GAME BANTAMS.—First, J. Sharp, Johnstone, Renfrewshire. Second, W. M. Gilmour, Shawburn, Hamilton. *Chickens*.—First, J. Sharp.

BANTAMS (Gold-laced Sebright).—First, D. Ainslie. Second, Lord Binning. *Chickens*.—Prize, D. Ainslie.

BANTAMS (Silver-laced Sebrights).—First, D. Ainslie. Second, Lord Binning.

BANTAMS (Any other variety).—Prize, J. Dryburgh, Paisley.

ANY OTHER DISTINCT BREED.—Prize, C. Thomson, Viewfield, Newton-on-Ayr.

DUCKS (White Aylesbury).—First, J. Dryburgh, Paisley. Second, H. Heys. *Ducklings*.—First, Lord Binning. Second, J. Sharp.

DUCKS (Rouen).—First, J. H. Macnab. Second, A. Grant, Glentayen Mill, Kilbarchan. *Ducklings*.—First, J. Sharp. Second, Miss Malcolm, Poltalloch.

DUCKS (Any other distinct breed).—First, J. Pollock, West Walton, Neilston. Second, P. Wilson, Lonsaig.

TRKREYS.—Prize, Lord Binning.

GESE (Emblen). Prize, H. Heys.

JUNGES.—Mr. R. Teehay, Fulwood, Preston, and Mr. J. Wilson, Wester Cowden, Dalkeith.

LEICESTER POULTRY SHOW.

THIS year's meeting of the Leicestershire and Waltham Society, held July 31st and August 1st, was a great success both as regards the number of entries and the general good quality of the birds exhibited. The weather, too, proved most propitious, and consequently the attendance of visitors was far greater than usual. The late exceedingly changeable weather had evidently affected very unfavourably the health of several pens, and from this cause we regretted to see the occupants of several pens, both Poultry and Pigeons, decidedly rumpy. The tent provided by the Committee was as good as could be desired, and the exhibition pens of Messrs. Turner, of Sheffield, made the whole one of the most complete and well-ordered shows we have seen for some time past.

The *Game* classes were good, and the *Grey Dorking* chickens were worthy of especial mention. Some good *Cochins* were shown, but of many the plumage was fearfully bad, so much so that it was a pity to exhibit them. The best varieties of the *Hamburghs* were decidedly the Spangled. The *Turkeys* were unusually good, but of *Geese* there was not a single entry.

The show of *Pigeons* was first-rate, and the competition was generally good in all classes. A very curious incident occurred in the Runt class, for, although the birds in one pen were of remarkably large

size, there was evidently a stain of the Frillback in the male bird, a circumstance never before witnessed. Most probably, though now so apparent, this took place several generations back. The Variety class for Pigeons was exceedingly good, and proved one of the most interesting features of the Show.

We regretted to find that many of the *Cochin* fowls were sadly diseased in the feet and legs. One of the best known remedies for this disorder being frequent application of sweet oil, this should be adopted before the disease becomes strongly confirmed.

DORKINGS.—First, H. Warner, Longborough. Second, L. Richards, Glendon Lodge. Commended, W. T. Everard, Alton Grange. *Chickens*.—First, H. Warner. Second, H. Pickles, Earby, Skipton, Yorkshire. Highly Commended, L. Richards.

SPANISH.—First, F. F. Foster, Birmingham. Second, W. T. Everard. *Chickens*.—Prize, W. T. Everard.

COCHIN-CHINA (Any colour).—First, H. C. Woodcock, Reasby. Second, J. J. Sharpe, Kettering. Commended, Mrs. T. T. Paget, Humbershire. *Chickens*.—First, G. Sturgess, Leicester. Second, Mrs. T. T. Paget. Highly Commended, H. E. Emberlin, Oadby; T. Sheppard, Humbershire.

COCHIN-CHINA (White).—First, Mrs. E. Clarke, Bedford. Second, W. J. Mellor, Colwich Rectory. *Chickens*.—First and Second, Mrs. Williamson, Queenborough.

GAME (Black-breasted and other Reds).—First, W. J. Mellor. Second, H. Warner. Highly Commended, Capt. Wetherall, Loddington. Commended, W. T. Everard. *Chickens*.—First, H. Warner. Second, W. T. Everard. Highly Commended, W. J. Mellor.

GAME (White, Piles, or any other colour).—First, W. J. Mellor. Second, A. J. Fludver, Ayton Hall. Highly Commended, W. T. Everard. *Chickens*.—Prize, W. T. Everard. Commended, H. Warner.

HAMBURGH (Golden-spangled).—First, H. Hohson, Walsall. Second, H. E. Emberlin, Oadby. Highly Commended, H. Pickles, Earby, Skipton. *Chickens*.—First, H. Pickles, jun. Second, T. Blakeman, Tetterhall, Wolverhampton. Highly Commended, R. Jacobs, Humbershire.

HAMBURGH (Silver-spangled).—First, H. Pickles. Second, A. Houghton, Astorby. *Chickens*.—Prize, H. Pickles.

BANTAMS (Gold-laced).—Prize, H. Draycott, Humbershire.

BANTAMS (Clean-legged).—First, H. Draycott. Second, H. E. Emberlin.

BANTAMS (Black clean-legged).—First and Second, H. Draycott.

GAME BANTAMS (Black-breasted and other Reds).—First, W. J. Mellor.

DUCKS (Aylesbury).—Prize, H. E. Emberlin.

DUCKS (Rouen).—First, J. Wright, Sysonby. Second, W. T. Everard.

TRKREYS.—First and Second, J. Johnson, Braunstone.

SWEETSTAKE FOR THE BEST GAME COCK.—Prize, W. T. Everard.

PIGEONS.

CARRIERS.—First, F. F. Foster. Second, G. Sturgess, Leicester.

TORBITS.—First, G. Sturgess. Second, F. F. Foster. Commended, H. Headley, Birmingham; H. Draycott.

POUTERS.—First, F. F. Foster. Second, H. Draycott. Highly Commended, F. F. Foster.

RENTS.—First, H. Headley, Birmingham. Second, F. F. Foster. Highly Commended, G. Sturgess.

JACOBINS.—First, G. Sturgess. Second, H. Headley. Commended, G. Sturgess.

FANTAILS.—First, H. Draycott. Second, F. F. Foster. Highly Commended, F. F. Foster; H. E. Emberlin.

MAPIES.—First H. Draycott. Second, H. Headley. Commended, H. Draycott.

ANY OTHER VARIETY.—First, F. F. Foster (Fairies). Second, H. Draycott (Black Swallows). Highly Commended, G. Sturgess (Satinettes, Blue Carriers); J. J. Sharpe, Kettering (Red Short-faced Mottles).

RABBITS.—*Heaviest Weight*.—First and Second, H. Draycott. *Greatest Length of Ears*.—First and Second, H. Draycott.

The Judge was Edward Hewitt, Esq., of Eden Cottage, Sparkbrook, Birmingham.

CLEVELAND POULTRY SHOW.

THE Poultry Show in connection with the Cleveland Agricultural Society was held at Redcar on the 1st inst. In some departments the Society's Show was not equal to those of past years. The exhibition of poultry, however, gave no token of decay; the entries in most of the classes were numerous, the quality of the birds generally good, and next to the "jumping" performances of the hunters, which is always the most popular exhibition on these occasions, the poultry attracted by far the greatest crowd. For their accommodation a large marquee had been erected, the pens were conveniently arranged round the sides and down the centre, carefully protected from contingent showers or the scorching rays of the sun. In this respect the arrangements at Redcar presented a favourable contrast to those of the late show at Stockton-on-Tees and of Driffield, mentioned in the "Journal" of last week. Surely it would be well if the parties who have the management of those Societies would pay a little more attention to this matter, for it can scarcely be expected that the owners of valuable poultry will send their birds to shows where they will be exposed to whatever kind of weather this changeful climate of ours may have in store.

Spanish stood at the head of the schedule, but these aristocrats of the poultry-yard did not, on this occasion, sustain their prestige; there were only two pens, and these were not of great merit. *Dorkings* came next, and were also deficient both in quantity and quality; indeed, Spanish and *Dorkings* were the weak point of the Show. *Cochins* were very good, especially the White and Partridge. There were three pens of adult *Brahmas* of fair average quality, although some of the birds were suffering from moult; also a pen of *Brahma* chickens in which the cockerel had enormous vulture hooks, and one of the pullets had clean legs. In *Game* there was great competition, and some very good black-breasted birds; in this class there were not less than ten entries. *Hamb-*

burghs also were in great force as to numbers, but there were not many really good birds amongst them, and white deaf ears were conspicuous by their absence. In the Any other variety class there were Hondans, Polish (Golden and Silver-spangled, and White-crested Black), Crève Coeurs, and Cuckoo Dorkings. The Hondans which obtained the first prize had certainly the recommendation of size, otherwise they were not particularly good, the Crève Coeurs were very fine birds.

Ducks were not quite first-class. Geese, however, were very good, as also were the Turkeys.

SPANISH.—First, O. A. Young, Driffeld. Second, G. & H. Ventress, Danby.

DORKING.—First, J. White, Warlaby, Northallerton. Second, T. C. Taylor, Middlesborough.

COCHIN-CHINA (Buff or Cinnamon).—First, O. A. Young. Second, Rev. J. G. Milner, Bellerby, near Leyburn.

COCHIN-CHINA (White).—First, G. Calvert, Darlington. Second, R. Enaby, Ormesby, Middlesborough.

COCHIN-CHINA (Partridge or Grouse).—Prize, G. Calvert.

BRAMA POOTRA (Any colour).—First, F. Powell, Knaresborough. Second, T. C. Taylor. Commended, J. H. Bennett, Redcar.

GAME (Black-breasted or other Reds).—First, W. Gatenby, Hemlington, Stockton. Second, P. Sturdy, Carlton, Northallerton. Commended, O. A. Young.

GAME.—Cock.—First, W. Bearpark, Ainderby Steeple, Northallerton. Second, J. Richardson, Middlesborough.

GAMES BANTAMS.—First, J. Grundon, Redcar. Second, F. Powell.

HAMBURGHS (Golden-pencilled).—First, G. & H. Ventress. Second, W. Bearpark.

HAMBURGHS (Silver-pencilled).—First, Rev. J. G. Milner. Second, G. Crages, Great Ayton.

HAMBURGHS (Golden-spangled).—First, O. A. Young. Second, G. & H. Ventress.

HAMBURGHS (Silver-spangled).—First, O. A. Young. Second, R. Jackson.

ANY VARIETY NOT NAMED ABOVE.—First, Rev. J. G. Milner. Second, G. Wren (Black Poland). Commended, G. & H. Ventress (White-crested Black Polish).

DUCKS (Aylesbury).—First, Miss Smith. Second, O. A. Young.

DUCKS (Ronde).—Second, O. A. Young.

ANY VARIETY NOT NAMED ABOVE.—Prize, Rev. J. G. Milner.

GEES.—*Goosings.*—First and Second, Mrs. Buffham, Redcar. Commended, O. A. Young.

GEES.—*Goosings.*—First, Mrs. Buffham. Second, O. A. Young.

TURKEYS.—First, Mrs. Buffham. Second, C. Trotter, jnn., Stockton.

POULTS.—First, J. Storey. Second, O. A. Young.

RABBITS (Any colour).—First, O. A. Young. Second, J. Richardson, Middlesborough. *Fancy Breed.*—Prize, W. Bainbridge, Newport, Middlesborough (Himalaya).

EXTRA POULTRY.—Commended, T. Long, Guisborough (Fancy Pigeons) J. Richardson (Rabbits.)

The Judges were Mr. Charles Dearlove, Bedale, and Mr. Samuel Burn, of Whitby.

SHEFFIELD RABBIT AND CANARY SHOW.

This was held on July 22nd and 23rd, at the Inkerman Tavern Alma Street, Sheffield. Some of the best specimens of long-eared Rabbits ever exhibited were shown. The exhibition of Canaries was very good for the season. The Buff Belgian class was very well represented, and the other classes were of rather an inferior quality. The exhibition was numerously attended, and gave the greatest satisfaction.

The following prizes were awarded:—

RABBITS.

LENGTH OF EARS.—First, J. Taylor, Buck, age five months and fourteen days, ears 2½ inches long, 5½ inches wide. Second, J. Mangham, Doe, age four months and eight days, ears 2½ inches long, 5½ inches wide.

COLOUR.—Prize, W. Wingfield. Black and white Buck, ears 2½ inches long, 5 inches wide.

YELLOW AND WHITE.—First, J. Mangham. Ears 2½ inches long, 5½ inches wide. Second, J. Leigh. Ears 1¾ inches long, 4½ inches wide.

GREY, WHITE.—First, W. Wingfield. Ears 2½ inches long, 5 inches wide. Second, W. Thoy. Ears 1¾ inches long, 4½ inches wide.

TORTOISESHILL.—First, J. Leigh. Ears 2½ inches long, 4½ inches wide. Second, J. Hewitt. Ears 1¾ inches long, 4½ inches wide.

SELF.—First, J. Taylor. Yellow Doe, ears 2½ inches long, 5½ inches wide. Second, J. Hewitt. Grey Doe, ears 1¾ inches long, 4½ inches wide.

WEIGHT.—First and Second, J. Owen. Black Doe, 13 lbs. 14 ozs. Black and white Buck, 12 lbs. 13 ozs.

CANARIES.

YELLOW BELGIANS.—Prize, J. Thomas.

BOFF BELGIANS.—First, O. Alton. Second, J. Alton. Third, R. Crossland. Fourth, J. Leigh. Fifth, J. Upton.

VARIATED.—First, J. Thomas. Second, J. Alton.

NORWICH.—First and Second, J. Thomas.

LIZARDS.—First and Second, J. Alton. Third, M. Oxley.

JONQUES.—Prize, C. Brown.

MULE.—Prize, J. Leigh.

MANCHESTER AND LIVERPOOL CENTENARY EXHIBITION.—A Committee meeting of the Manchester and Liverpool Agricultural Society, was held July 22nd, at which special prizes were directed to be awarded for Spangled Hamburgs, which had been omitted from the schedule of prizes. This decision was directed to be advertised, and the time for these entries was extended to the 5th of August. This, perhaps, will satisfy "Y. B. A. Z."—COCKEREL.

SAWDUST AS AN ABSORBENT AND MANURE.

ONE would imagine the farmers in "H.N.'s" neighbourhood (see page 63), to be a remnant of those gentlemen of ante-diluvian notions who, unfortunately for themselves and in many cases for others, will look with a supercilious eye on all modern improvements, and are continually referring to and mourning after the customs and practices of the "good old days." New styles of agricultural machinery, or systems of farming at variance with their own, meet with their most decided disapproval; and if a man's success depends upon the opinions of his neighbours, there is little chance for him who, in opposition to all these fixed notions, will commence and carry out his own ideas with all the improvements of the present age rather than follow the rules laid down by his forefathers, and to depart from which would be to such persons beyond the bounds of possibility. If the opinions and prophecies pronounced by these worthy gentlemen come but a quarter true ruin is near at hand, and the downfall of our enterprising young farmer will be a warning to all who will try "new schemes," and only what could be expected of a man who thinks he knows better than his elders, and will not walk in the way his fathers trod.

But these things cannot always be talked down. The untimely end so enthusiastically predicted is still a vision of the future, but every day becoming less distinct. The crops which under the improved systems of manuring, tilling, sowing, weeding, reaping, &c., are yielding three or sixfold the former produce of the ground, are being gathered in in prime condition in half the time and with half the labour; and, as "nothing succeeds like success," we may hope next season to see many converts who will be as much for as they were against the improved systems and appliances of the present day.

With one exception, my fowl-houses have for flooring ground simply taken from the garden after a few days of dry weather, turned over once a-week, and renewed with fresh earth to the depth of 18 inches twice or thrice a-year; this buries all animal matter, keeps the place sweet and clean, and is a valuable source of enjoyment and exercise to birds in a confined state. As a stimulus to their exertions I give them earth over which I have thrown quicklime before spring-planting; this is slacked by dew and rain, and after being well incorporated with the earth, is of inestimable value to the fowl-houses, the birds never tiring of scratching and pecking for the shell-forming material. I am, through this plan, never annoyed with soft-shelled eggs, nor the untidiness of oyster shells or lumps of old mortar about the yard.

The house which is not after this plan is an outhouse with brick flooring. My first winter of poultry-keeping I had great difficulty in keeping this place dry, losing two or three birds in the season; but by spreading sawdust to the depth of a couple of inches all moisture is absorbed, and the fowls kept warm and clean. As soon as it becomes damp, which is, of course, dependent on the state of the weather and the number of fowls, it is collected and spread amongst plants of the cabbage tribe, and forthwith they expand and brighten up considerably, and I do not think my garden is infested with wire-worms to a greater extent than it would be with other kinds of manure.

An amateur farmer in the neighbourhood keeps his pigs literally rolling in sawdust. They are as clean as any lady's lapdog, always in splendid condition, and always fit to be seen without holding a perfumed handkerchief to the nose. He finds the manure exceedingly valuable for heavy lands, the sawdust rendering the earth porous and light. Many of the stables in the island are also kept supplied with this material in preference to straw.—A. LE CHEMINANT, Foulon Vale, Guernsey.

SWARM DESERTING ITS HIVE.

ALLOW me to ask your opinion on the following occurrence:—On the 21st of July I took and secured a fine swarm of bees, placed them under a straw hive, and they kept there apparently all right till the 29th, just eight days, and then quitted the hive and disappeared altogether; but during their stay in the hive they formed about 6 inches by 4 of a comb very perfectly. Having kept bees for some years a similar circumstance has not before occurred to me. Account for it I cannot, and therefore I ask you to enlighten me.—J. SMITH, Begbrook House, Frenchay, near Bristol.

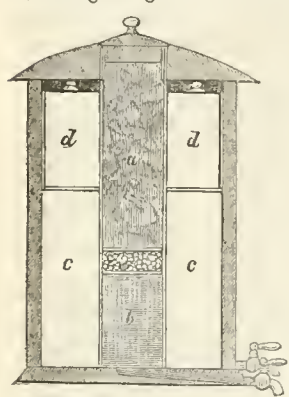
[You do not say if it were a first or a second swarm which

deserted its hive after abiding there eight days. If it were the latter it must have had a young queen, and even first swarms are sometimes headed by juvenile princesses. We believe, therefore, that such was the case in this instance, and that the queen perished by some accident during, or more probably by mistaking her hive on her return from, one of her wedding flights, and that this caused the bees to desert the habitation in which they had no longer any chance of establishing themselves as a permanent colony. If your hives are near together this occurrence would seem to indicate that they should be more widely separated.]

MILK-COOLER AND BUTTER-PRESERVER.

AN ordinary refrigerator takes up room, is costly, and should be kept in a cool place. It is evident that one which occupies less space and can be placed in the dining room or in a pantry, would save many steps and much work.

The engraving is a section of a water-cooler and a refrigerator which is ornamental in its exterior and perfect in its operation. Externally it resembles the ordinary water-cooler, being made in a cylindrical form, of tin or galvanized iron, and of any required size, from that of a water-cooler to a capacity sufficient for the wants of an hotel. Between the outer case and the inner is interposed some non-conducting material, which will keep the coolness in and the warmth out. In the centre is a cylinder (a) for the reception of the ice. This has a lid separate from that of the refrigerator, and near the bottom has a filter under which is a water receptacle (b) for holding the product of the melted ice, which can be drawn off pure ice water by the lower cock, for drinking purposes. Surrounding the central ice-chamber are movable cans (c c) for milk, and receptacles (d d) for butter, meats, &c. It is a *multum in parvo*, convenient, useful and beautiful. It is the subject of three patents, and for further information, address John R. Elder, Indianapolis, Indiana.



The advantages of this milk and butter preserver and water-cooler are such as to commend it to all housekeepers and dairy-men.—(*American Journal*.)

QUEENS OF THE CURRENT YEAR LEADING OFF SWARMS.

BEEs APPROPRIATING IMPRESSED WAX.

AT one of the meetings of the German bee-keepers at Potsdam, as related in your Journal of May, 14th, 1863, Baron von Berlepsch states that he had never known a queen of the current year to lead off a swarm (I presume a prime swarm), I think the following may disprove the above:—

On July 11th I noticed in one hive a bee commotion, both at the entrance and in the super. At night all seemed quiet, and the following morning work was resumed, and no dead queen was found thrown out, though looked for. On the 25th of July, fourteen days after, a swarm issued (a dead queen, full size, being thrown out of the stock in the afternoon); the bees began to work at the sides of the hive, and carried in no pollen. On the 28th, I saw a queen issue forth, but she returned in a minute *statu quo*. On the 29th I was absent, but fancy she must have had a successful flight, for the bees were carrying in pollen on the 30th. Looking to the fact of the bee commotion, and of the issue of a swarm fourteen days afterwards, I think I may safely exclude a lost swarm.

Have any of your readers found the bees to appropriate the impressed strips of wax instead of converting them? I have noticed two such cases this year, doubtless owing to the bad honey season. In one case all the strips seemed quickly to disappear, but small pieces of comb only being formed; in the other I have watched the bees gradually nibbling the strips away, the bees hanging from the strips towards the main body of workers; of course I cannot state that the wax is not thrown out, but I hardly believe this to be the case.

I quite agree with the statement of "AN ISLE OF WIGHT BEE-KEEPER" that the honeydew is the main source of the honey-harvest.—J. C.

[We have ourselves witnessed a similar instance in which the old queen was sacrificed, and the first or prime swarm was therefore led off by a young one. Although not usual, we are inclined to fancy that this exchange of queens takes place more often than is generally supposed, and can therefore scarcely believe that no case of the kind had ever come under the observation of the great German "bee-father." We have little doubt, however, that what the Baron really meant was that he had never known a queen of the current year send off what is usually known as a "maiden" swarm. Such an instance, however, did occur in our own neighbourhood a few years back, and was related to us by the bee-keeper, who declared (and in this we most implicitly believed him), that he had never before had a "maiden" swarm from a second, or, as he called it, a "pin" swarm.

We have often found strips of impressed wax either wholly or partially gnawed off by the bees, instead of being converted into comb.]

OUR LETTER BOX.

BURY POULTRY SHOW.—The Buff Cochins-Chinas of Mr. H. P. Laseh, of Woolhit, near Bury, were highly commended at this Show, though his name did not appear in our prize list.

HOUDAN AND CRÈVE CŒUR FOWLS (*Lady-barn*).—Our advertising columns will give you the addresses of numerous good amateurs who have surplus stock of the kinds you inquire about, but we do not know any of the French dealers.

FOWLS DYING SUDDENLY (*Western*).—We are at a loss to account for the mortality, unless the Ducks and hens are too fat and die in consequence of being egg-bound. All the non-sitters are subject to sudden death and divers diseases consequent on the production of the many eggs they lay, but such cases are by no means general, and besides, the Ducks would not be similarly visited. Feed them moderately. Use whole corn, and ground oats slaked with water. Avoid stimulants, and give them lettuce that have run to seed, or at least to stalk. Ducks and fowls should never roost together. Examine the next that dies. We believe you will find that eggs have been crushed in the passages. The hen has strained to her utmost, but internal fat has rendered laying impossible.

KEEPING POULTRY PROFITABLY (*Rustic*).—We believe the greatest profit is to be made from eggs, especially in the neighbourhood of large towns, where they sell well during the winter. It is now so well known which are the most prolific breeds, and also the ages at which pullets begin to lay, that the production of eggs by healthy, and well and judiciously-fed birds can be made a certainty. It will then only remain for you to insure a sale to make the profit you have read of. You will, however, need a proper locality, a good run, a dry light soil, and if possible the facilities for growing the feed necessary for them. You are one of a very numerous class asking for poultry information in regard to the remuneration to be derived from it. It is like everything else. If you were to start by putting down on paper all the possible expenses attending such a venture you would never undertake it, but if you are careful and can give personal superintendence, we have no doubt you can make it pay.

PIGEONS CANKERED (*W. B.*).—Mr. Brant, our best writer on Pigeons speaks of this disease in full in the following words:—"The only disease that has troubled me to any extent has been canker—a cheesy-looking lump or lumps of pus, of very disgusting odour, which forms in or about the mouth, and which I consider highly contagious. I have sometimes bought a bird with it; at other times it has appeared without any apparent cause. I believe it arises, in the first case, from a bad state of the blood, and breaks out in any part wounded by fighting, or otherwise. It is also said to arise from their drinking from a tin vessel, or from dirty water. It is very fatal to young birds. When old birds are attacked, I remove the matter with a thin piece of wood, cut like a little spatula, and rub the place thoroughly with caustic. This must be done effectually at once, or it will only form again, spread more, and become more difficult to eradicate. I believe confinement and want of condiments to be a common cause of this disease."

INCUBATOR—SUPERS (*Inquirer*).—We know nothing about the incubator you mention, and the book is no authority. Wood or straw supers are better than those of glass in many respects; but they cannot be produced on table like those of glass.

RABBITS.—"It seems to me that in breeding long-eared Rabbits, so great a length of ear as 21 or 22 inches, is not very easily obtained. I have purchased first-class Rabbits of several strains, and bred young ones, and yet cannot obtain such great lengths as those spoken of in the "Rabbit Book" published by you. I should be glad of a little information respecting them. Permit me to ask a few questions. If a Rabbit will not grow after five months old, what length ought a Rabbit to be at three months old? and at what rate ought it to grow each week up to five months to have ears 21 or 22 inches long?—W. R."

[We shall be obliged by some of our readers sending us information in reply to these queries.]

POULTRY MARKET.—AUGUST 7.

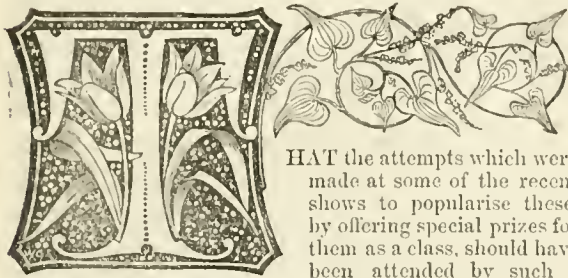
	s.	d.		s.	d.		s.	d.		s.	d.
Large Fowls.....	2	6	to	3	0	Pheasants	0	0	to	0	0
Smaller do.....	1	9	to	2	0	Partridges	0	0	to	0	0
Chickens	1	6	to	1	9	Grouse	0	0	to	0	0
Geese	4	6	to	5	0	Guinea Fowls.....	0	0	to	0	0
Ducklings	2	0	to	2	8	Rabbits	1	4	to	1	5
Pigeons	0	8	to	0	9	Wild do.....	0	8	to	0	9

WEEKLY CALENDAR.

Day of Month	Day of Week	AUGUST 15—21, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.	
			Day.	Night.	Mean.		Days.	m.	h.	m.	h.	m.	h.	m.				h.
15	TH	Ilkeston and Shipley Horticultural Show.	73.0	50.0	61.5	16	43	af 4	22	af 7	18	af 7	41	af 4	16	4	20	237
16	F		73.2	51.2	62.2	19	48	4	20	7	45	7	45	5	16	4	8	238
17	S	Nowport Horticultural Show.	73.0	50.1	61.5	22	49	4	18	7	40	8	51	6	17	3	56	239
18	SUN	9 SUNDAY AFTER TRINITY.	73.2	50.8	62.0	15	51	4	16	7	35	8	59	7	18	3	43	230
19	M	[and General Meetings.	73.0	51.1	62.0	18	53	4	14	7	1	9	8	9	19	3	30	231
20	TU	Royal Horticultural Society, Fruit, Floral,	72.6	50.5	61.5	19	54	4	12	7	20	9	17	10	20	3	16	232
21	W	Tamworth Horticultural Show.	72.4	49.1	60.9	14	55	4	10	7	1	10	23	11	21	3	2	233

From observations taken near London during the last forty years, the average day temperature of the week is 72.9°; and its night temperature 50.4°. The greatest heat was 92°, on the 18th, 1843; and the lowest cold 32°, on the 21st, 1850. The greatest fall of rain was 1.12 inch.

SWEET-SCENTED FLOWERS.



THAT the attempts which were made at some of the recent shows to popularise these, by offering special prizes for them as a class, should have been attended by such a

small amount of success is not much to be wondered at; for the passion for flowers capable of attracting and pleasing the eye has of late years ridden rough-shod over all the claims of the minor sense, casting into the shade and nearly driving out of cultivation many fine old plants which, unfortunately for them, have little else than their fragrance to recommend them. But there are still many left, especially ladies, who have not yet bent the knee to the idol of show, and who still hold the somewhat antiquated opinion that a flower garden destitute of fragrance is not a flower garden at all; and it is very amusing to see how some people, not intimately acquainted with flowers, instinctively poke their noses into every flower they meet, taking it for granted that every one should have a scent, and that those which have not are undeserving of the name.

There is, however, no necessity for the two classes—scented and scentless—coming into collision, as the requirements of both can easily be satisfied without injury to either. As a rule, though subject to many exceptions, our sweetest plants and flowers are the least showy; their mission, then, in the flower garden evidently is to “blush unseen,” to rusticate in any out-of-the-way place where the conditions essential to plant-life can be obtained, there to disseminate their sweetness without obtruding their homely forms too much upon the super-cultivated eye. What I mean is, not that they should be planted at the back of the shrubbery borders and in similar places, but that beds in situations of secondary importance should here and there be set apart for them, so as not to mar or interfere with the beds or groups designed for show alone. In those may be grown such plants as Carnations, Pinks, Double Rockets, Stocks, including the Night-scented, Mignonette, Cheiranthus Marshalli, Alyssum, Candytuft, Enocheras, Liliums, and hosts of others known to everybody, many of them winsome things to look at in their own brief season, but most of them all but banished from the flower garden proper, and now used principally for increasing the confusion of herbaceous borders.

Of fragrant-flowering shrubs there is an endless variety. The common Jasmine that winds its spray around so many cottage homes, and its tender associations round so many hearts, can never cease to be a favourite with all. For training on the pillars or latticework of verandahs, arches,

or covered walks, but particularly for walls or ruins, it is well adapted. With it may be used many of the Clematises, especially *C. flammula* and its varieties, all well-known plants, rich alike in gracefulness and delightful fragrance.

The Sweetbriar will always make its presence felt, and in shrubberies or unkept grounds can hardly ever be used to excess. For centuries poets have rhymed its praises, but by gardeners it seems to be so lightly appreciated, that about many gardens not even a single plant of it is to be found.

Daphne cneorum is a delightful little flowering shrub of exquisite scent, and, from its low neat habit, well adapted for small circular beds. It can be propagated by layers with the greatest ease and certainty, and does well in any soil that will grow *Rhododendrons*. *D. odora* is only half-hardy, and cannot be trusted out of doors in winter; *D. mezereum* and *laureola* are both hardy, and highly scented.

The Balm of Gilead (*Dracocephalum canariense*), and the Sweet Verbena (*Aloysia*), being half-hardy, require to be treated as bedding plants, but well repay all the trouble which that may entail, though the latter will stand any ordinary winter against a south wall if well protected.

We saw some time ago in these pages something from the graceful pen of “WILTSHIRE RECTOR” about “Lilac-tide,” as he designates the short sweet period when that delightful shrub is in bloom. Here we have no Lilac-tide, but we have other times when fragrance and beauty abound throughout our woods and glens, when the wild Rose and Honeysuckle scramble, entwined, from rock to branch, and scatter abroad their incense in grateful acknowledgment of the love that endowed them with such delightful odours. Then we have a purple-tide, which no art can imitate, when mountains and moors are all ablaze with blooming Heather, the Sweet Gale contributing its feeble quota from the marshy grounds where the Heath refuses to grow, when both uniting their sweetness they load each passing breeze with a perfume so delicate that no breath from any home-born blossom can vie with it; yet I do envy “WILTSHIRE RECTOR” his Lilac-tide, for it is a brief but gloriously perfumed season, and all the sweeter for its brevity.

The purple and white small-leaved Persian Lilacs should have a place in every flower garden; as standards they are very handsome, and are easily formed by grafting on the common Lilac or on the Ash. They may be propagated by layers, suckers, and by grafting on the Privet.

Like music, sweet smells possess in no small degree the power of associating themselves in our memories with particular places, persons, or circumstances, so that whenever we find ourselves within the charmed circle of certain perfumed flowers, the reproductions of these are by some mysterious process, and in a dim and shadowy way, immediately brought before us; they are also sometimes so identified with certain spots in our gardens or elsewhere, that if for a season they are wanting we feel uneasy and disappointed every time we pass. That gratifications so

pure and so easily obtained should ever be wanting is, to say the least of it, to be regretted.—*AYRESHIRE GARDENER.*

ABOUT THE LAND'S END.—No. 1.

SOME five and a half centuries since—namely, in the reign of Edward II., the Knights of the Shire for Cornwall passed seven days on the road in travelling to the Parliament in London, and were equally long in journeying home again, so they claimed from their constituents the expenses of fourteen days, at the rate of half-a-crown per day. No wonder, travelling at that tardy pace, that it was enacted that there should be no bushes or dikes within 200 feet of the highway side, nor that if any underwood was left nearer than that distance, the owner of that underwood was held responsible for felonies committed in its vicinity. Even as late as the early part of the last century we read, "The Fly coach from London to Exeter slept at a good house at Morecombe Lake, east of Charmouth, the fifth night from town. The coach proceeded the next morning to Axminster, where it breakfasted, and there a woman barber shaved the coach."

Broccoli and early Potatoes could not then have been grown at Penzance for the supply of the London market as they are now, when they can be in the Cornish garden and in Covent Garden within twelve hours. To learn among other things how these vegetables are managed, and reversing the places of departure and arrival, I reached Penzance, and as perversity would have it, a wet day succeeded that of my arrival.

Now, if there be a time when a wet day away from home is superlatively detestable to me, it is when it occurs the first day after I have arrived at a strange seaside town. I have had no opportunity to purchase guide-books, nor to take the measure of the place and its people; but in this instance, as in most other obnoxious occurrences, I had a compensation, for I found out a folio some century old, the theme of which is the antiquities of Cornwall, and some of its revelations I think will be as novel to the readers of "our Journal," as they were to me.

The Cornish language is now numbered with the dead, for the last on record who could discourse in it, "Dolly Pentreath," was buried so long since as 1778, in the churchyard of St. Paul, about three miles from Penzance, but the old volume before me retains many words of the language, and I will jot down a few.

These Cornish men must have been connoisseurs in kissing, for I met with four distinct names for a kiss. *Impoc*, that must have meant an ardent one; *Poccul*, surely one less hearty; *amane*, one tender and gentle; and *aff*, which sounds as if it describes one which would gladly have been avoided.

Again, was there not sly satire in calling a man, *goas*; and a goose, *goaz*?

More in unison with the sobriety of these pages, let me note the Cornish names of some of our garden produce, and of the animals your contributors delight to honour. Some of these names evince a close relationship to other languages. I will write them down alphabetically:—

Ernan, plums.
Aidlen, a fir tree.
Avell, an apple.
Brelly, a rose.
Brisych, a cabbage.
Caboon, a capon.
Conlm, a pigeon.
Chelhoc, or Kullag, a cock.
Eroinen, a turnip.
Fig-bren, a fig tree.
Gajab, a daisy.

Guin-bren, the vine.
Jar-gini, a turkey hen.
Kullag-gini, a turkey cock.
Mel, honey.
Morar-tala, a strawberry.
Moybren, a mulberry tree.
Per, a pear.
Spezaden, a gooseberry.
Spusen, a pipkin.
Teil, a raspberry.

Era is the Cornish for labour, and we may trace it appropriately in *er*, a field; *ero*, a ridge; and *erberou*, gardens; but a large part of the market gardeners near Penzance totally ignore such a derivation, and practically demonstrate that they consider idleness and gardening synonymous. My first stroll was to Tolcarn, an elevation about a mile from Penzance, for *Asplenium lanceolatum* is said to be found there. I failed in my search for it, but in the rich alluvial soil of the ravine, I had no difficulty in finding examples of the worst possible gardening and orcharding—every department slovenly conducted, and everything overwhelmed with weeds.

This miserable mismanagement is the more remarkable, because on the opposite side of Mount's Bay there are very superior examples of gardening in all its branches. Before proceeding to details, some of which would otherwise be rather startling, let me state that the soil is a light loam, about 2 feet deep, thoroughly well drained by sloping to the south, and

resting on greenstone. The climate is very mild and equable, hills of greenstone formation sheltering, in a semicircle, from all winds except those from the south and south-west, on which points are the sea. A consequence of these favourable circumstances is, that the summers are cooler, and the three other seasons far milder than in any other district of England. I will only jot down in juxtaposition comparisons with London.

Mean of Year.	Winter.	Spring.	Summer.	Autumn.	Hottest Month.	Coldest Month.	Average yearly rain, ins.
Penzance 52.1°	44.6°	49.6°	60.5°	53.8°	61.5°	43.0°	44
London 50.4°	39.6°	48.6°	63.2°	50.2°	64.4°	37.8°	24

Knowing all this, and therefore, prepared to observe plants grown in the open air throughout the year, that near London can never flourish, unless protected by glass, yet I have marvelled at what I have seen at Gulval.

In the rectory here resides the Rev. W. W. Wingfield, with whom some twenty years since, one of the Editors of "our Journal" co-operated to foster the rising taste for domestic fowls. "The Poultry Book" was the result of that co-operation, and which would have been differently arranged had not the original intention been to confine its contents to the management of the then newly-introduced Cochins-Chinas. However, its illustrations are still unsurpassed. They have been incorporated in a new edition, its details employed, and the authors consistently abused by the new editor, at least so I was informed by Mr. Wingfield.

For nine-and-twenty years he has been rector of this parish, and during that time has created the grounds which now beautify the rectory. When he first was inducted, it can scarcely be realised that a mere field fronted the house, for it is now embosomed in sheltering, vigorous plantations, and the lawn embroidered with flower-beds. My notes must be desultory.

The prime and prevailing impression is the intense healthfulness, and, indeed, excessive growthfulness (if there be such a word), of every tree, shrub, and herbaceous plant. The Roses, without mulching, are undisfigured by either green fly or spotted leaves, testifying to Rose-growers in drier localities, if such testimony be still needed, that an increase of moisture, both to the roots and foliage are the shields from those plagues.

Evergreens Mr. Wingfield has wisely made to predominate in his plantations, not only because ornamental throughout the year, but because they afford shelter from the powerful south-westerly gales, and because they flourish here marvellously. *Berberis Darwinii*, usually seen as a pigmy bush, is here 8 feet high, as many in diameter, and exuberantly vigorous. *Camellias* are as healthful as they are in Japan. A *Pinus insignis*, only 18 inches high when planted in 1852, has now a trunk 6 feet in circumference at its base, 60 feet in height, and with branches issuing round down to the turf's surface. A *Dracena indivisa*, only ten years old, endured last winter's intense cold, which even at Gulval, descended to 18°, or fourteen degrees of frost, and is really like a dwarf Palm, being 14 feet high, and its stem more than a foot in circumference at 5 feet from the ground. Another specimen not quite so large, was slightly injured by the frost, and this check to its growth has caused it to emit suckers all round the base of its stem. The *Cedrus deodara* Mr. Wingfield has discarded, for when it attained to a stature of 20 feet it came within the influence of the powerful winds from seaward, and had the tops destroyed. This deserves the attention of a gentleman on the Welsh coast, who some months since inquired in "our Journal" what Conifers would succeed in his locality. *Boronias* and *Myrsine undulata* endured last winter's severity uninjured in the open borders, and *Cassia corymbosa*, though killed down to the soil's surface, is now sending up most vigorous shoots. On remarking that I had seen some very large Agaves in a villa garden near Tolcarn, Mr. Wingfield observed in reply, that he had observed them in full bloom in the Scilly Islands, their flower-stems measuring 36 feet in height. It has also flowered at Mousehole, about two miles west of Penzance.

The climate is not suited to the fruitful growth of some trees, and Mr. Wingfield specified the Walnut and Filbert. He said he was not aware of any in the neighbourhood, for they were found never to ripen their young wood so as to attain a bearing condition. Neither does the Vine succeed for a similar reason. Mr. Wingfield has tried it under a frame in imitation of the ground vinery, but unsuccessfully. The Vine was over-luxuriant, but bore no Grapes. It is possible that shallow planting, and in a poorer soil, might reduce the luxuriance; yet even then it is very doubtful whether the young wood would ripen in this uniformly mild and moist climate. From this,

too, Peaches and Nectarines are deficient in flavour, and the Apricot and Green Gage are rarely fruitful.

Many rare native plants are found in this district, and I mention this for the purpose of warning botanists not to accept as truth the statements published that some of those plants are to be found only in very restricted localities. For instance, I was told that *Asplenium lanceolatum* was only to be obtained at the foot of Tolcarne, whereas I saw it growing in the fissures between blocks of greenstone supporting the sides of a lane near Gulval. The Cornish Heath, too, *Erica vagans*, said only to be found near the Land's End, I am informed is abundant in other localities.—G.

VINES AND VINE BORDERS—NATURAL TEMPERATURES.

I HAVE delayed answering the letter of "G. H.," which appeared under the above heading (May 23rd), because I wished to obtain from Mr. Wills and Mr. Thomson the information I asked them for, and also because I wanted to receive the photographs of my Vines from the photographer before giving the true account of my first year's experience in forcing the Vine, which Mr. Wills desired I would do. It would, however, be much more satisfactory to me to know that Mr. Wills intends to carry out his expensive system of border-making. If he means what he writes, will he accept a challenge to a three-years race on our respective Vine hobbies?

I have been anxious to see how Mr. Thomson would make his statement about a temperate climate being most suitable to the Vine, agree with the tropical heats he recommends to the amateur Vine-grower. I cannot accept the fact of his treatise having reached the sixth edition as sufficient proof of the soundness of the information it contains. I want something more than this; and when I, as one of those for whom Mr. Thomson professes to have written his treatise, ask him to prove the necessity for the temperatures he recommends, I think he is bound to reply.

I have read with much attention the letters upon the Garston Vineyard and Mr. Meredith's large bunches of Grapes, which Mr. Wills says reminded him of the Grapes of Escheol. It is, I think, reasonable to believe that the soil and climate of the valley of Escheol were peculiarly favourable to the growth of the Vine. The soil of the hill country of Judæa is generally inferior to the loamy soils lying upon our own chalk hills. The soil of Escheol is an ordinary loam lying upon limestone, the upper surface of which is of a loose marly or shingly nature. Situated between Hebron and Bethlehem the valley has an elevation of about 2,800 feet above the sea. Van de Velde, writing from near Hebron, says, "The cold is so great that I sit as close as I can to the fire to warm my stiffened fingers and fit them for writing. Just fancy our encountering so severe a climate here at the end of March." March is the first spring month, and the Vines would be starting into growth. In April the later rains fall in abundance, and continue till the end of May. In June the heat of the day is considerable, but the nights are cold, and the dew so copious that the trees drip as with rain. July and August, the second and third months after the rains, are warm and dry, but the temperature is that of southern Europe, and not of the tropics. The vintage is in September, and about the end of the month the former rains make their appearance. The fact that the Vine in the valley of Escheol begins its growth in March and ripens its fruit in September is sufficient proof that the climate is not such as Mr. Thomson recommends to amateurs. And if I fail to find his temperatures in the hill country of Judæa, which may fairly be considered as the home of the Vine, shall I meet with better success in Madeira? Do the Canaries produce rich clusters, mingled with the glittering green and gold of the Orange trees, and the broad waving leaves of the Bananas, growing upon the low, sultry ground of the coast, or upon the breezy slopes of Oratava?

"G. H." says I have made some important omissions in what I have written about natural temperatures; but he does not tell me what these omissions are. He merely tells me that mean temperatures in the shade are only calculated to mislead in making comparisons between one year and another, and, therefore, we must follow the same rule in making a comparison between the French climate at the 45th degree of north latitude and the temperature we should maintain in our vineries. I am well aware that mean annual temperatures are of little value to gardeners; but these can have no surer

guides than the mean temperatures of the seasons, the distribution of the annual rainfall, the latitude and longitude, and the elevation above the sea level.

If "G. H." will read my letter again he will see that I did not ask Mr. Thomson the question, "That if he begins with 100° in the sun for Vines, how he will go on if he is to advise temperatures for semi-tropical and tropical plants?" Mr. Thomson does not place his thermometer between the foliage of his Vines and the glass; and when a vinery is closed in the afternoon it is no longer receiving the direct rays of the sun; even the slanting rays still thrown upon the glass are, to a certain extent, prevented by the sash-bars from falling on the Vines. The moist heat of 100°, which Mr. Thomson likes to enclose in his vinery, is certainly solar heat, the same as that registered by a thermometer on the north side of a tree in my garden; but they are shade heats also. Mr. Thomson should be allowed to defend his book himself. It has hitherto been received by gardeners, amateurs, writers, and reviewers as a good practical treatise on the Vine. I received it as a conscientious and fairly-written account of his own experience. I have proved his temperatures to be fancy temperatures, unnecessary and unsafe to the amateur, and not supported by reference to the temperatures of any Vine-growing country in the world. I am also prepared to prove, by reference to Nature's treatment of the Vine, that Mr. Thomson is as wrong in other matters as he is in temperatures.

"G. H." has made a poor attempt at the thermic scale of cultivation for the plants I mentioned. The Date Palm will grow north of the Mediterranean. It does not require a heat of not less than 100° in the shade by day, and the temperatures of localities in Algeria give as good an idea of the climate of that country as the temperature I gave of the Isle of Wight does of the climate of England.

There is, however, one part of the temperate zone where, during the summer months, a constant tropical heat may be found. The valley of the Jordan, in the vicinity of the Dead Sea, has a temperature of 70° to 100°; and here the Date Palm ripens its fruit from ten to twenty days earlier than it does in northern Africa. The plains of Moab and Jericho, on the east and west of the Jordan, have never been celebrated for their vineyards; but high up in the neighbouring hills, at an elevation of 3,800 feet, Escheol still produces its Grapes in bunches of 10 and 12 lbs. weight.

I have but little to say about my own Vines. The photograph of the roof of one of my houses and the two small bunches I have sent to the Editors of the Journal will be more satisfactory than anything I could write. I may, however, mention that my houses have been freely opened to my neighbours, and many gentlemen and gardeners have seen my Grapes in all stages of their growth. The Vines were started in December, and were breaking well on the 22nd of January. On the 15th of April the wood began to get brown at the base, and on the 22nd of May I cut my first ripe Grapes. Some of the bunches had berries 3½ inches in circumference. The smallest number of bunches on any one Vine was twelve, the largest number twenty-nine. The rods are 8 feet in length, and cover in the three houses 1,700 square feet of glass, and the total number of bunches borne by my ninety-five Vines was 1986.—H. S.

CALCEOLARIA FAILURE.

THE failure of one of the best varieties of the shrubby class of yellows this season in so many places where it had stood before, leaves an impression that this plant can be no longer depended upon for giving that display of its particular colour in which it has hitherto been unrivalled. Its failure in a great many places has been so general for some years that it has been given up, and something else substituted for it. Now, as it would appear that the adverse season of 1867 is likely to drive it from the remaining places it has hitherto adorned, can any of your readers suggest a substitute? Many years ago I tried *Neja gracilis*, but it is late in flowering, and *Gazania rigens* is too shy a flowerer to follow the *Calceolaria*; and this season's experience leads me to think that the small-flowered French Marigold (*Tagetes pumila*), requires a warmer summer to do well, as it has flowered very sparingly as yet. We have not yet a good variety of yellow *Tropeolum* to depend upon; perhaps after all *Tagetes pumila*, or as it is sometimes called *T. signata*, may be turned to the best account, as it flowers most abundantly. It would, however, be doing good service to the floral world if those who have been able to secure

the flowering of their *Calceolarias* as of yore, or have a variety that does not "go off" as so many do, would impart the secret of their success, or, which would be still better, state if they have obtained a substitute, and its name and particulars. Most likely amongst the many composite flowers we possess one may be worked in to do good service in the golden hue in which *Calceolarias* hitherto have reigned supreme.—M. F.

ROSES ON MANETTI STOCKS.

At one time, I believe, I was nearly the only amateur friend of the Manetti stock. Now I receive letters from distinguished amateurs, speaking of their complete conversion. I have two letters now before me. Mr. Postans, of Brentwood, says, "I have become a very decided convert to Manetti. Henceforth no more Briars for me, save for weak but fine things, for which Manetti is too strong. My Manetti Roses this year have been half as big again as the Briar Roses; and then the size it gives the plants is wonderful." Mr. Kent says, "The converts to Manetti Roses round here may be counted by hundreds." I knew that this would be the case if Manetti Roses were properly propagated and properly planted, and, I may add, properly pruned and looked after. The general treatment of Roses on any stock or on its own roots is quite barbarous. Let us hope that we shall have this noble flower better cultivated, seeing that it gives such gratification to all classes, from the occupier of a throne or palace to the humble cottager. I have had, and shall continue to have, a daily Rose show here till frost stops all further blooming. In mild winters I have cut good bouquets as late as January.

The first division—that is, Roses not cut down by the frost, are just commencing an abundant second series, and the Roses cut down by the frost are in abundant bloom and bud, and I will undertake to keep them so throughout the season. "D., Deal," is coming here on the 17th, and he will see whether it is so or not. I propose now to say a few words on the following points:—

1. THE TIME OF PLANTING.—The readers of THE JOURNAL OF HORTICULTURE will open their eyes with amazement when I tell them that on the 5th I bought of Mr. Gill, Blandford, who is one of the best Manetti budders in the kingdom, about three hundred plants, which will be planted here on August 7th. As the nursery is so near here (seven miles), I will undertake to do this without the least risk—in fact, as Manetti strikes so freely, the temporary check will only cause it to confirm its wood, which otherwise might be immature at Christmas. I do not recommend this early period if the Roses have to travel. The ground is now saturated with the rain, and all that is wanted is a blazing sun, which will cause the stock to throw out an abundance of rootlets. Of course the foliage must be kept moist for a few days. After the stock roots I care not how soon the foliage drops off. I have moved Manetti Roses in the middle of summer without a bud, branch, or leaf withering. It is to be observed that whilst immature wood on the Briar will not bear, immature wood of the Rose on the Manetti will bear abundantly. The chief object of trying to get the wood ripe is that it endures severe winters the better. Manetti Roses may be planted at any time of the year when the ground will work.

2. PLANTING.—Have your holes dug ready, and having cut the points of the roots even, put in alternately soil and manure (rotten), and having filled up the hole to about 2 inches over the point of union, tread firmly and close up to the stock, which will prevent the plant throwing out suckers from the stock; it rarely throws them up from the roots. Do not cut down your plants. The stock requires a good body of wood to carry off the sap. By severe cutting the sap forces out eyes from the stock, which otherwise would remain dormant. Before planting cut out any eyes that you can see.

3. BUYING ROSES.—1. *Novelties*.—Buy these carefully, and do not put them under a hot south wall. They will be mildew all over. Plant them in an airy (not windy) place, and keep their roots and foliage well supplied with water. They have, probably, the sporules of mildew about them when they arrive, being glass-reared. I shall dip all such in a weak solution of blue vitriol; 1 oz. to a bucket of water would probably be strong enough. Two ounces are what I use for strong plants with firm foliage. Sulphur does the same mischief that mildew itself does—it stops up the pores of the leaves. With regard to novelties, they are often inferior to what we had before, varieties without variation, and distinct Roses, which

means, I suppose, distinctly bad, or having bad attributes. What we want are distinct Roses, and better than those we have. In the line of crimson, Charles Lefebvre, Senateur Vaisse, Duchesse de Caylus, Lord Macaulay, Maurice Bernardin, and now Alfred Colomb—first-rate—an improved free-blooming Duc de Rohan, and Lady Suffield will take a deal of beating. In the light line, the same may be said of Mrs. Rivers and Madame Vidot; and in the dark line Prince Camille de Rohan and Pierre Notting, a deep-petalled, globular, full-centred, and noble Rose, which does M. Portemer the greatest credit. "D., of Deal, brought cut specimens of the following Roses, and I thought them very good and promising:—Miss Ingram, a globular creamy white Rose, very beautiful, a little more substance in the petals would have pleased me more; Horace Vernet, a fine, deep-petalled claret-red Rose; Thorin, Joséphine Beauharnais, Madame Fillion, and Fisher Holmes were the others, and good. Not one of them, in my opinion, was equal to Alfred Colomb, the best new Rose I have viewed for some time. I have seen Exposition de Brie. It is good, and like Maurice Bernardin; but it is not so good as yet as that fine Rose. These two are grown at the Rev. R. Price's (my clergyman), in this parish. They are both good growers. In his garden I saw Xavier Olibo and Jean Cherpin, both fine dark colours; but *presque pleine*. These Roses have been highly recommended to me by good judges:—Madame Margottin (Tea), Antoine Ducher, Charles Verdier, Horace Vernet, Madame Pulliat, Madeleine Nomin, Monsieur Noman, Paul Verdier, Thorin, Mlle. Rady, Mlle. Annie Wood, Camille Bernardin, Madame Rousset, and Marie Baumann. Some of the above Roses I shall buy. I have only a few Roses to cast out, such as King's Acre (a bad opener), Madame C. Verdier, large, flat, and had centre, and Madame Derreux Douville, worthless. 2. *Buy Old Stuff*.—Though I have a good stock of Charles Lefebvre, Senateur Vaisse, and Camille de Rohan, I have bought fifty more of each. Let beginners buy fifty each of these and Jules Margottin, Comtesse de Chabillant, and W. Griffiths. They will then have something worth looking at. They are types, and of excellent habit. The above fine Roses can be bought by the hundred on strong Manetti stocks at the same price that twenty worthless novelties will cost!—W. F. RADCLIFFE, Okeford Fitzpaine.

DUTY-FREE TOBACCO.

ABSENCE from home has deprived me of the pleasure of noticing the remarks of your correspondent "G. S." in your issue of July 25th. and, although Mr. Robson has in a later number gone very fully into the question of the employment of cayenne or Capsicum as an ingredient wherewith to adulterate tobacco for the protection of the revenue, I may be excused if I add a few words on the subject.

In the first place, I know from my own experiments, and experiments tried by several well-qualified horticulturists, that cayenne is injurious to plants of delicate organisation, unless it is used in extremely small quantities; that it is most unpleasant to use it in conservatories, whether detached or to which access is obtained from a dwelling-room; and that the quantity which could be safely used would not prove a sufficient protection for the revenue. As "G. S." says, half-a-grain in a pipe of tobacco does not make a very enchanting smoke, but a snuff-taker would not be troubled by a small per-centage in his high-dried, whilst a chewer of tobacco would be grateful for the additional condiment. In fact, cayenne is used in some factories in the United States to give pungency to poor tobacco. Thus, it will be seen that cayenne is not the article the Government chemist is likely to recommend to the Commissioners of Customs as a sufficient protection for a valuable revenue. Independently of this, I am inclined to the opinion expressed by Mr. Robson, that cayenne will not kill the green fly, having tried it repeatedly. Again, looking at the question in a commercial point of view, cayenne is an expensive ingredient, and would go far to make up for the saving effected by the removal of the duty.

Tobacco, whether in the form of tobacco paper or as ordinary shag cut tobacco, is generally admitted to be efficacious in eradicating most of the pests of the greenhouse; and it remains to be seen whether tobacco cannot be so treated as to render it unfit for smoking, chewing, or snuffing, before the Government will entertain any proposition for freeing it from the duty. The assa-fetida, although extremely offensive, is not objectionable in burning; the sulphur in so large a proportion as twenty-five parts is destructive of vegetable life. Cannot some other ingredient be

suggested in lieu of the sulphur? I venture to think it can, and if the readers of THE JOURNAL OF HORTICULTURE will think the matter over, I have no doubt that experiment, or, what is much the same, accident, will point to a way out of the difficulty. If any of your correspondents would like to communicate with me on the subject, I shall be most happy to give them every attention and assistance; and, I may lay down as a sort of formula, that whatever ingredient is suggested, it must be such as will become thoroughly incorporated with the tobacco, and utterly spoil it for smoking, snuffing, &c. It must also be an ingredient which cannot be extracted by chemical or mechanical means. No suggestion which does not cover this ground will find favour with the Commissioners of Her Majesty's Customs.—J. P. TAFE, Secretary, Richmond Cavendish Co. (Limited), Liverpool.

ROYAL HORTICULTURAL SOCIETY.

AUGUST 6TH.

FLORAL COMMITTEE.—There were upwards of sixty subjects for examination, and among them some extremely interesting and novel objects, and, as might be expected, many not up to the standard of the present day. Disappointments must necessarily occur, but, we hope, only to stimulate to further exertions.

Mr. Burgess, Nottingham, exhibited four seedling variegated Pelargoniums; Mr. Hinton, of Dunstable, *Cupressus Lawsoniana* variegata, of which there are numerous similar forms; Mr. Richards, gardener to Lord Londesborough, *Cattleya pallida*, a variety of C. Wagneri; Mr. G. Fry, seedling *Fuchsia*, Blue Boy, a dwarf, compact, free-flowering plant, bearing semi-double flowers, useful for decorative purposes; a label of commendation was awarded. Mr. Fry sent also two seedling Zonal Pelargoniums, *Souvenir de Maximilian* and *Pillar of Gold*; Mr. Wallering, Lewisham, Zonal Tricolor *Empress Eugénie* and *Beauty of Lewisham*; Mr. Robert Poynter, seedling *Fuchsia* *Royalty*, with pale yellow foliage; Messrs. E. G. Henderson, *Fuchsia* *Golden Leaf*, a perfect gem for decorative purposes, the intense golden colour of the foliage very effective—first-class certificate; Tricolor Zonal Pelargonium *Lady Muncaster*, very good, requested to be seen again in younger plants; Howarth Ashton, a seedling Tricolor of great merit, dark zone, with shaded crimson—first-class certificate; Fair Emily, not equal to *Italia Unita*; Tricolor Zonal Orange Gem; Silver Beauty, a broad white-edged variety; Zonal Pelargonium *Reticulatum*, the leaves much reminding us of *Lonicera aureo-reticulata*; probably this plant may be the origin of some curious variegations—label of commendation; seedling *Fuchsia* *Alba coccinea*, unlike any other *Fuchsia* yet exhibited, the tube of the flower crimson, sepals white, corolla dark shaded crimson; a useful decorative plant—second-class certificate; *Verbena* *Harlequin*, striped white and dark crimson, not effective for bedding; *Ophiopogon jaburau* fol. var., which received a first-class certificate in 1862; also *Ophiopogon spicatus*, a purple-flowering species; *Methonica* or *Gloriosa* variety; *Lobelia* *Indigo Blue* and *Lobelia speciosa spectabilis*, not in condition to judge of their merits, being too recently potted; *Dianthus* *Napoleon III.*, one of the prettiest forms of *D. hybridus*, deep rich crimson flowers, most ornamental—first-class certificate.

Messrs. Jackman, Woking, exhibited a collection of their splendid *Clematis*, three new seedlings of which received a first-class certificate, which they richly merited; *Lady Bovill* with broad greyish blue petals; Mrs. Bateman, a finely-formed mauve or light lavender; Mr. T. Moore, deep purple, a very large starry flower with a conspicuous white eye, much resembling a *Passiflora*. These single flowers were much admired; but no description can convey any idea of the truly magnificent specimens now in full perfection at the nursery at Woking. No person could regret any little trouble which might arise in visiting these nurseries, now in their glory, and so conspicuous for the varieties of *Clematis*.

Mr. Green, gardener to W. W. Saunders, Esq., brought a very pretty Cape Pelargonium (perhaps not a Pelargonium, but one of the family), with zonal foliage; the specimen was very dwarf and was raised from seed; this will probably be very useful for decorative purposes, especially for edging—second-class certificate. A special certificate was also awarded Mr. Green for a collection of interesting plants.

From Mr. William Paul came seedling Zonal Pelargonium *Snowdrop*, not equal to other white-edged varieties, such as *Princess Alexandra*, &c.; Prince Silver Wing, a pale Tricolor Zonal. Mr. R. Dean, Ealing, sent dwarf bedding *Lobelia* *Blue Tom Thumb*, a neat erect-growing plant, useful for decorative purposes, and which received a second-class certificate. Messrs. Downie, Laird & Laing had a seedling Zonal Pelargonium belonging to the Bronze and Gold section, called *Countess of Kellie*, one of the very best of this section, with a remarkably bright zone; it was awarded a first-class certificate. Zonal *Kentish Hero*, one of the same tribe, was likewise shown by Messrs. Downie & Co. Mr. Williams, Holloway, was awarded three first-class certificates for distinct and good seedling varieties of *Athyrium Filix-femina*; the names were accidentally wrongly placed, and will be corrected; a golden *Gymnogramma* was also shown by Mr. Williams. Mr. Earley, gardener to F. Pryor, Esq., Digswell, exhibited a remarkable specimen of the Climbing Fern *Lygodium japonicum*, 6 or 7 feet high; a special certificate was awarded it.

Mr. C. J. Perry, Castle Bromwich, sent a large collection of very fine *Verbenas*, twelve seedlings, not yet sent out. The following were awarded first-class certificates:—Miss Turner, J. C. Ward, Thomas Harris, Hercules, and Francis Harris. The others were all good flowers, more or less distinct from others in cultivation; a special certificate was awarded for this beautiful collection. Mr. Bland, Richmond, sent several seedling *Fuchsias*; one very promising variety, called *Lass of Richmond Hill*, had bright coral sepals, a white corolla, and was very neat in outline; the Committee requested this to be sent again. Pelargonium *Queen of Roses*, very much like *Beauté de Sarrenes* and others, were also shown by Mr. Bland. Mr. George Smith, Horsey, exhibited two very fine hybrid Nougay Zonal Pelargoniums, producing unusually large and fine trusses—*Eclat*, a rosy carmine, and *Grand Duke*, an orange scarlet, both seedlings, received first-class certificates. Messrs. Low, of Clapton, sent *Warzewiczella aromatica*, with violet-stained whitish flowers, and received for it a second-class certificate; and Messrs. Lee, Hammersmith, a small plant of *Rhus glabra laciniata*, a perfectly hardy shrub, with very ornamental foliage. For this a first-class certificate was awarded. Mr. Eckford, Colshill, exhibited seedling *Verbenas* *Pluto*, *George Stevenson*, *Lady Mary Wilde*, *Hermit*, *Mrs. Bouverie*, and *Criterion*; also a fine cut specimen of *Saccolabium Blumei* majus.

G. F. Wilson, Esq., brought a very splendid collection of cut *Liliums*, among them some fine examples of *L. auratum* and *laucolatum*, also *L. tigrinum* *Fortuni*. One specimen seemed not to be recognised by any one present; it was thought to be of the *Thunbergii* type, deep orange with a yellow band, spotted with black, forming a very handsome cluster of flowers, the name is to be ascertained; a first-class certificate was awarded it, and a special certificate was given for this interesting and beautiful collection. Mr. Anderson, gardener to T. Dawson, Esq., Meadow Bank, near Glasgow, exhibited splendid cut specimens of *Orchids*, among them *Odontoglossum Alexandræ*, *Oncidium leucophyllum*, *Saccolabium Blumei* *Dayii*, *Cattleya crispata*, and *Epidendrum* species; a special certificate was awarded the collection. Mr. Shaw, of Manchester, exhibited specimens of the same varieties of *Athyrium Filix-femina* as those shown by Mr. Williams, and to him also first-class certificates were awarded.

PRESERVING VERBENAS AND BEDDING PLANTS FROM RABBITS.

I BEG to inform your contributor "R. F.," that I have this season effectually preserved my *Verbenas*, *Lobelias*, &c., from hares and rabbits, by sprinkling them overhead twice a-week with cow's wash. My man dips an old whitening brush into the liquid, then shakes it gently over the plants, so as to let it fall in small drops, as large quantities will burn.

I do not know what intervals may be allowed between the applications. I have had it done twice weekly to make sure. The trouble is small, and the success has been complete. There is no smell left to offend any one.—G., Glasgow.

STANHOPEA TIGRINA AND OCULATA.

OF the many varied forms in which the family of *Orchids* present their bloom to our view, there are certainly none which to the most careless observer show a greater departure from the usual features of ordinary flowering plants, than the larger-flowering species of the genus *Stanhopea*; and the most careless and indifferent to all Flora's beauties are, nevertheless, constrained to look at and admire the singular shape, great beauty, and peculiar position of the flowers of this genus, for in general the flowers appear where the roots of another plant might be looked for, and in shape they might be mistaken for some huge insect or sholl fish of peculiar form, while in substance they fully carry out the latter idea. Nevertheless, *Stanhopeas* are but seldom met with as forming leading objects in a collection of *Orchids* at a horticultural show—the reason, doubtless, is, the plants do not remain so long in flower as some of the *Oncidiums*, *Cattleyas*, and other genera; but in point of beauty, of colouring, size of blooms, and number of them, as well as the rich appearance the swelling buds present, there is certainly nothing in the ordinary class of *Orchids* met with at shows that equals a well-bloomed plant of *Stanhopea tigrina*, when such plant has been allowed to attain a fair size, without that pulling to pieces which is so often carried on to multiply specimens. Two plants of this being in bloom here (Linton Park), at present, I have been induced to give some particulars of them, not that they differ from the usual type, but to call for a more extended culture of this certainly one of the finest of all the *Orchid* family.

There are, I believe, more varieties than one of *Stanhopea tigrina*. The one we have has a rich dark ground with lemon-

coloured spots, varying in size from that of a threepenny-piece to small dots, but usually they are of uniform size, about midway between the sizes stated. The spikes supporting the bloom are not so closely packed with flowers as is the case with *S. oculata*, of which, also, there is a pretty good specimen in flower at the same time. On the contrary, *S. tigrina* rarely has more than four blooms to a spike, and often not so many. One of the plants now in bloom has eighteen flower-spikes, each with flowers expanded or in buds that will be open in a day or two. There are two or three more spikes coming, but they will be later. The number of flowers fully expanded and in perfection is fourteen, with two past their best, and thirty-eight in bud ready to burst directly. The expanded flowers that are near together cover a considerable part of the bottom of the hanging-basket in which the plant is grown, each individual bloom measuring from 6 to 7 inches between the tips of the wing-petals, the upper petal being proportionably large. The second plant is not so large, but there are thirteen fully-expanded blooms upon it, with fifteen more in advanced bud, and several spikes to come that will probably continue the blooming period for some time. The plant of *S. oculata* that is in bloom has thirty-five fully-expanded flowers out at this time, with eight more to come. The spikes contain from two to seven or eight blooms each. They are not so large individually as the other, and widely different in every respect, but both are deserving more attention than they often receive, as the thick fleshy substance of the flowers resembles shell or waxwork, and it requires no great stretch of the imagination to conjure up a resemblance to objects both singular and dangerous. I may add that the scent is also very strong, some say sweet, but as this is a matter of taste, and, perhaps, being fastidious in that respect myself, I give no opinion. One thing, however, may be said in favour of this Orchid and its flowers, the latter require no long sticks or wirework-training to bring them into position for being seen, for the flower-spikes are short and the back of the flower rests very often on the bottom or sides of the basket. Our plants being grown in wire-baskets or rustic wooden ones, the spikes generally protrude at the sides, but sometimes at the bottom, and in all cases hang downwards. The foliage of the plant is also good, and removal from place to place is attended with less of those preparatory arrangements than are requisite for most Orchids. Certainly it cannot be set down on the ground like a flower-pot, but in a suspended position few plants can possibly look more handsome, and at the same time more remarkable.—J. ROBSON.

TABER'S EARLY PERFECTION PEA.

I OBSERVE in the pages of your Journal two strong recommendations of this excellent early Pea. With respect to my own experience of it, I may state that when I received an offer from Mr. Taber last season, with the remarks contained in his circular, I was attracted by the description given, seeing that the properties which it was represented to have were just what were wanted. Having tested it, I have found it quite equal to what was represented.

It appears to be as early as any variety known, with the advantage of being much stronger in the haulm, more productive, and much longer-podded than the early Peas of late introduction. It is several days earlier than Sangster's No. 1, shorter in growth, but very stout and vigorous. It appears to be quite distinct from any other Pea which we have yet had, and I consider it will be a boon to early-Pea growers. I observe the Prince Pea is also spoken highly of by one of your correspondents. This also I have tested, and find it an excellent late Pea.—STEPHEN BROWN, *Sudbury, Suffolk*.

[If Taber's Early Perfection is with you several days earlier than Sangster's No. 1, your Sangster's cannot be true.]

NIEREMBERGIAS.

IN seasons like the present, when we hear so much of plants failing and disappointing the expectation of the planter, it becomes us to look around and see which has succeeded, and where so, inquiries might be prosecuted to ascertain if a still further improvement cannot be made in the class of plants that have done well this somewhat unfavourable season. Amongst those which have done well I again wish to call attention to one I have on several occasions recommended to more extensive cultivation—*Nierembergia angustifolia*, as it has made more progress than most plants which I have, and at all times pre-

sents a greater mass of bloom than anything else in its way; but, unfortunately, we have only one colour in this plant, and I want to know if the new species introduced by Messrs. Veitch be likely to present us with other hues, that may be extended hereafter when assiduous cultivation is brought to bear upon it and the older specimen. A good blue or a good scarlet *Nierembergia* would be a gem, and I hope we may have such eventually. A good yellow would also be very agreeable, as neat-growing plants of dwarf habit with yellow bloom are by no means plentiful. *Gazania splendens* is too shy in blooming to become a general favourite. However, now we have a second species of *Nierembergia*, I hope to hear good things of it, and even if its appearance be not so inviting as could be wished, I nevertheless hope to see its progeny or that of our present species appear in another garb, with the same good habit and free-blooming properties of our present highly ornamental plant.—J. R.

WOBURN COTTAGE GARDEN SOCIETY'S EXHIBITION.

THE moralist and the philanthropist are now recognising the fact more fully than heretofore, that the love of change is inherent to humanity. Hence the very change of employment is often so delightful as to become to us actually rest in labour. The industrious agricultural or gardening labourer may work actively in his garden in an evening, stimulated by the conviction that he is labouring for himself and those who are so dear to him; but he can hardly realise the agreeable zest which in addition is felt by the mechanic and the artisan, from the very change in the kind of employment. It is greatly owing to this fact that the best-kept gardens and the best managed florists' flowers are found under the care of the artisan and manufacturing classes.

This mere change of occupation, however, will not alone meet the natural yearning for variety. The field, and the shop, and factory, even when relieved by the ever-varying attractions of the garden, will in course of time, all, more or less, be impressed with a tame monotony. The heart begins to yearn not only for change of employment, but for that change of scene which involves a cessation from our usual labours. "All work and no play, makes Jack a dull boy." The proverb is quite right, but it often does more, it often makes Jack a bad boy as well as a dull one. The craving for change often stimulates to conduct that shades with sorrow the course of a life that otherwise might have been bright and joyous. Great moral outbreaks might have been prevented if more healthy and innocent outlets had been provided to satisfy alike the exuberant spirits of youth and this natural craving for change. Our great social gatherings, our trysts, our fairs, our town statutes, and our village wakes and feasts, might have all been very useful institutions in their day, though degenerating too often in our times to such scenes of rough vulgarity, ribaldry, and debauchery, as to grieve the hearts of the right-minded and true-hearted.

The change was the great attraction, looked forward eagerly to for months, and then under the stimulus of the excitements so lavishly afforded, things were done and money foolishly spent that told most injuriously on many frequenters for long periods afterwards. With this natural craving for change, and now and then freedom from usual toil, in addition to that which the glorious Sabbath ever brings—the poor man's day, the day of the seven, in which the working man may be in reality the gentleman—with this craving, as it were a part of our being, it would be the height of folly to deny all means for its gratification, just as it will be great wisdom to find an outlet for this natural yearning in scenes and circumstances that will improve, elevate, and refine our natures, and insensibly make us better, whilst doing something to make us more intelligent.

Woburn, like most country towns, has its annual fair, with the usual accompaniment of stalls, shows, dancing-booths, and drinking-rooms; and I am inclined to suppose that one of the chief aims of the Committee of the Cottage Gardeners' Society, was to change the mere common aspects of the fair into a grand annual holiday, by means of a horticultural and floral show and a rural fête, in which the arrangements, and the amusements, and the kind of refreshments, excluding all intoxicating liquors, should be entirely under their control; and so well did all seem to succeed, so far as I could see in my short visit, that I should much regret to learn that amid such success, even financially considered, there should from any cause be a dis-

continuance of such fêtes, just as I would rejoice to know that some hints that such fêtes would be discontinued proceeded only from some morbid prophets of evil.

I attended for the second time this Woburn fête on the 31st of last month, and in answer to several inquiries as to success, aims, modes of operation, extent of influence, co-operation of so many parishes, high aims of the Committee in gratifying the refined tastes of the wealthy as well as meeting the sympathies of the more humble, I would respectfully refer all interested to the salient points of the Show as given in No. 280, for August 7th, 1866, and would refer now merely to a few thoughts suggested by the Show of this year, and without any attempt at arrangement.

The Show, thanks to the fine weather and the excellence of the arrangements, was a great success even financially considered, and that is saying a great deal, when in addition to £60 to £70 given as prizes, three musical bands were engaged to gratify the visitors, a militia band in the fine pleasure-grounds of the Abbey in the forenoon, the band of the Coldstream Guards in the afternoon at the Show grounds, and another band in the evening until close on nine o'clock to meet the wishes of those who found an outlet to their exuberant spirits in dancing innocently on the green sod in the presence of friends and neighbours.

I may here mention, in passing, a simple fact for the benefit of all concerned, that notwithstanding the buoyant spirits and hilarity prevailing, no sooner did the music of the evening cease at the specified time, than the great assemblage that crowded the field at once left in the most orderly manner; in fact, I heard several gentlemen say they could not have acted more quietly and orderly if leaving a church or a cathedral. I may also state that the numbers collected in the Park as spectators of the cricket-match, left at once at the appointed time.

But to return to the important matter of finance. Many, and these the not most timid, were a little sensitive owing to a little change in the arrangements. With great liberality the noble proprietors of Woburn Abbey have generously opened the mansion and grounds to visitors one day in the week. The opening of the Pleasure-grounds, Park, and Evergreens on this fête day was a separate and distinctive favour, and last year was reserved for those who had a ticket of admission to the Cottage Garden Show. This year, for reasons of which I am ignorant, though I might guess that one of them would be the unwillingness that entrance to these fine grounds should be at all associated with a regular money payment, even though that should be for the benefit of the Cottage Garden Society, the Gardens were open as last year, but free as on a common open day, and under the usual regulations; and in such circumstances it was feared that the finances of the Society would suffer. Here, however, as it often happens, liberality brings a rich reward. I was assured that many visited the Abbey Gardens on that holiday who could not have gone on an open week day, and took as many of the younger branches of the family with them as they could not have afforded to pay for at the exhibition ground. The great proportion, however, of the visitors of the Abbey Gardens found their way ultimately to the Flower Show; so that whilst the visitors to the Abbey were considerably above four thousand, not less than five thousand visitors were admitted to the show-field on payment. This is just an additional fact to prove that even on the low consideration of a money point of view, a liberal policy is generally the most remunerative.

As I have hinted at the good behaviour manifest in the show-field, so here I may say that if the great numbers that visited the Abbey Gardens had been "lords and ladies born," they could not have conducted themselves better, or manifested greater admiration for the beauty of the flowers and the grand results of the artist's skill, a sure proof—with only trifling exceptions—that if you treat the great masses of working people with trust and confidence, they so feel their sense of honour appealed to, that they will return that trust with integrity and gratitude. I had the pleasure of leisurely traversing all these grounds in the cool of the evening along with Mr. McKay, the able Superintendent, and regretted exceedingly to find even one solitary empty soda-water bottle. Not another vestige of the visit of the thousands could be found, unless that here and there the walks had been so beautifully swept by the long dresses of the ladies, that the finest brooms and the best workmen could not have equalled the operation.

The Show was a success, because a great improvement on previous exhibitions in the quality of the horticultural produce exhibited. The advantage of such societies is not only the

festering of greater industry, but the growing of better productions, and the showing them in the best condition. As a general rule, the people near Woburn are still behind in the growth of flowers and the showing them off to the best advantage. If I see another show, I shall expect to find cut flowers and plants in pots very much improved; in fact, I shall expect as much improvement in this respect as has already most manifestly taken place in fruit and vegetables. The quality of the hardy fruit left little to be desired, and instead of the shapeless, unequal-sized produce we used to see, there were myriads of bunches of Carrots, Turnips, and turnens of Potatoes, each specimen as if it had been cast in a mould. One great advantage of a careful decision in such matters is, that the cottager sees clearly what peculiar excellencies he must aim to secure. Several of the collections of fruit in the various classes were very tastefully arranged—a matter well worthy of encouragement, as in such cases judges in general look more to the kinds of fruit and the quality of each than the taste displayed in arranging it. Fine Grapes, especially Muscats, golden ripe, were exhibited by Mr. Turner, gardener to the Rev. G. G. Harter.

Though the great feature of a cottager's show was still paramount, there were more articles exhibited by amateurs and gentlemen's gardeners, more nurserymen also gave their assistance to fill the tables, and Ferns and fine-foliated plants were contributed from the gardens of Sir Philip Duncombe, all tending to the completeness of the Show, and furnishing examples of neat, compact culture and growth to our cottager rivals. A prize was offered for a rare plant of any kind, and it was taken by a beautiful little yellow variegated plant of the Bittersweet (*Solanum dulcamara*), belonging to R. Stevens, Esq., Apsley, which from its mode of growth seemed as if it would come in well as a hardy edging to flower-beds. The plants shown by my friend, Mr. Manning, were well got up, and elegantly named on large cards.

No prize was offered to nurserymen, but still there were four present—Mr. Sheppard, Bedford; Mr. John Woods, Hockliffe; Mr. Tirebuck, Luton; and Mr. Jabez Chater, from Cambridge. Mr. Sheppard exhibited a fine collection of Roses; Mr. Woods, a good collection of small, flowering, miscellaneous plants, among which were some very neat, very dwarf Lobelias, very useful for miniature edgings, whether white or blue; also, the pretty small white-and-crimson-striped *Petunia* I noticed so favourably last year, and which seems to maintain its character and habit; also a good collection of flowers of Hollyhocks, Picotees, and Carnations. Mr. Tirebuck exhibited Carnations, and his fine-foliated and different-coloured *Scarlet Pelargoniums*, in the shape of neat-grown plants, such as they have been described in this Journal, among which in the full-petalled kinds stood conspicuous *Emily Moreland*, and among the *Nosegays* the neat lilac rose-coloured *Felix*.

Mr. Chater exhibited some large *Gooseberries*, and a fine Cherry, beautiful boxes of Roses, glazed cases of leaves of fine-foliated seedling *Pelargoniums*, cut flowers of greenhouse and hardy plants, and among other subjects fine flowers of the Hollyhock, and varieties of the Zonal *Pelargonium*, mostly new. As likely to be generally interesting, I will allude more particularly to these. And first of the Hollyhocks—a class of flowers, the great improvements in which will ever be associated with the name of Mr. William Chater, of Saffron Walden. With respect to seedlings, I must give some prominence to one of the year, *Robert Fish*, a fine, compact, well-formed flower, of a lovely crimson salmon colour, tinted with an orange shade, with good smooth guard petals—a very promising kind. Another promising seedling had a salmon amber tint, but was unnamed. I subjoin the names of twenty-four fine flowers shown on cards, the most of which have been raised at times by Mr. J. J. Chater, and the others by Mr. W. Chater:—

Autumn Queen, bright rose; *Princess of Wales*, crimson, light shaded; *Yellow Prince*; *Arthur B. Chater*, blush and tinted; *No Plus Ultra*, lilac purple; *Lord Warden*, ruby crimson; *Plurimus Dulsis*, blush, purple base; *Iris*, white, purple base; *Shades of Evening*, grey and purple red; *Agenera*, purple; *Vice-Chancellor*, crimson salmon; *Acme*, peach; *George Paul*, brilliant crimson; *Aurantiaca*, shaded orange; *Decision*, buff, tinted with rose; *Constellation*, crimson; *Glory of Walden*, glowing crimson scarlet; *Richard Cobden*, salmon scarlet; *Princess*, deep purple; *Cygnat*, pure white; *Midnight*, dark maroon; *Queen of Bufts*; seedling, rich salmon and amber; seedling, fine apple-blossom colour.

I forbear to mention the noble spikes shown, in which the flowers were equally fine, and showed what may be done by

attention, shortening the spike, and when necessary thinning out the bloom-buds, and thus furnishing good lessons to all Hollyhock growers who wish to show. For my own fancy I like to see this majestic plant rear its head untouched and unstopped.

Amongst the scarlet section of *Pelargoniums* shown, I will merely mention a few seedlings of the present and the last year:—Christine Surpasse, very like Christine in colour, leaf, and habit, but without any white in the flower, and less propensity to seed freely; Vulcan, a bright scarlet of 1866, superior to Cybister; Marion, also of 1866, pale rosy pink, clear colour, considered an improvement on Mrs. W. Paul; Masterpiece, also of 1866, a bold large salmon scarlet flower; Alexander McKay, a seedling of 1867, bright vermillion, with a strong tint of Yellow Nosegay, with zonal foliage, and large truss of middle-sized Nosegay flowers; Forget-me-not, the grand sparkling gem of the lot, combining all the best properties of Christine, Caroline Lindsay, and Wiltshire Lass, being of a bright rose colour, clear and shining, with a distinct white blotch at the base of the top petals, dark-zoned foliage, and good habit. I shall be much deceived if this beautiful variety does not come abundantly into request for pots, vases, borders, and, above all, to lend its charm to the chaste bouquet.

When I used to see more of country shows than I do now, I used to be impressed with the simple fact, that to a great degree they flourished and declined just in proportion as they were patronised or not patronised by nurserymen. There may be two reasons for this—first, the great paying public will not long pay unless it has quantity as well as quality for its money; and, secondly, the keen amateur, who cares for nothing that is not new, and of the most improved shape and colour, will not trouble himself to go where there is no chance of seeing such subjects in a nurseryman's collection. The groups, stands, and boxes of the nurseryman are, therefore, attractive features at all such exhibitions. Why, then, do nurserymen not visit, or having done so at first, discontinue to bring their plants, &c., to such gatherings? Is it not well to be out with something like the truth, and say, just because nurserymen are obliged to look at such matters not merely in the light of honours, but in the way of business, as associated with *£ s. d.*? When the first enthusiasm has evaporated, there will be fewer orders for the articles in trade. The societies are generally too poor to enable them to offer prizes that would be worth while competing for by nurserymen, and the mere privilege of having a place assigned for the articles they bring, and a barren vote of thanks, and not always that, forwarded to them by the Committee, will not go a great way to meet their necessary expenses by road and by rail. In this respect my Woburn friends might, in a small way, give a general lesson. I have no authority for stating their general practice in this respect, but I believe it to be this, that though no prizes are offered in this class, such awards are made as will cover a portion if not all of the necessary expenses, and this I think should in all cases be done. Good as the Show was, it would have been deprived of some of its most striking attractions if the nurserymen had not given their valued help.

There were, besides the cultural produce, some artistic designs well worthy of the extra prizes awarded. There was a beautiful grey-coloured model of the old church, done by a young woman of Woburn; there was a neat model flower garden, enclosed within a very neat iron railing; there was a handsome model of a villa, with all its necessary accompaniments of conservatory, pleasure grounds, flower-beds, gravel paths, lawn, croquet ground, and miniature figures of ladies and gentlemen wielding the mallet, done by a youth of seventeen years of age, Thomas Randall, showing that genius has not yet died out amongst us; and lastly, there was a cross some 9 feet in height, the main trunk neatly covered with grey Lichen, and on this were neatly fastened 116 distinct kinds of Grasses, collected with great trouble in the park, as there is now no Grass garden at Woburn Abbey. A card gave the botanical and English names of every specimen. This was the work of Mr. Phillimore, of the Abbey, who showed the arms of the Bedford family in Red, White, and Black Currants last year. This assemblage of Grasses deserved more attention and study than it was possible for a visitor to give it.

As regards the prizes for the best-kept allotments and gardens, this feature and the mode of operation described last year are well worthy of imitation in similar circumstances. The taking up four fresh districts or parishes every year renders the efforts of the Society more diffused, and on all hands I heard nothing but encomiums of the good thus effected. So strong is the

emulation produced, that I noticed that in one of these places (Eversholt), there were as many as fifteen competitors.

The prompt payment of prize-money, commencing at 6 p.m., and on the grounds of the Exhibition, is another feature. Rocks there may be ahead on which the vessel of this Society may founder—rocks arising even from the extended sphere of its operations—rocks arising from the difference of view that may rightly exist as to the adjuncts in the way of entertainment, that may or may not be added to the Exhibition—rocks arising from an unwillingness of the minority to act heartily with the majority when their own views do not meet the general approval;—but prompt payment will be none of these rocks. I have known cases in which the cottagers had long to wait, and then lost time in order to obtain their prize-money. I have a vivid recollection of a scene—the cottage prizetakers being brought into an elegant room, after the members of the Society had dined, to receive a well-meant lecture on mutual sympathy, industry, and temperance, and then go to the bar to receive their money. I thought then, and think now, that the sight of the table with its glasses, tumblers, and wine-decanter would be more powerful as an example than the goodness of the precepts. The time may come when we shall do without these money prizes; but I fear it is not yet. I read with my accustomed zest the article in the number of July 25th, on harvest homes and village shows, by the warm-hearted "WILTSHIRE RECTOR," and with still more zest his remarks on giving no prizes, as a means of preventing in a small parish heart-burnings, tiffs, huffs, and quarrels. Right well may such a plan succeed. There is, however, hardly a more human-devised good that does not bring some alloy in its train. The want of prizes would damp emulation, and leave the spectators as ignorant as before as to what constitute the best points in different products. I read these statements all the more earnestly, as years ago I would have gladly avoided the evils of competition in other and wider fields. A friend of my youth, of the same opinions—a zealous schoolmaster, was resolved to carry it out in education. There should be no proud dun, no depressed dull dunce recognised in his classes. But old Adam, in the shape of human nature, was too strong for him. The clever boy would know he was clever, and the dull boy would feel he was dull; and the want of the recognition of this fact did much, if it avoided envy and its evils, to arrest also that noble-heartedness which leads the clever, well-principled boy to help the weak and the dull boy. It is the glory of our land that there is scarcely a village in which those better supplied with means will not help the poor and the afflicted. Help given to the strong and the able often does more harm than good, as everything does that sinks a man's independence and begets in him anything of the dependent or the pauper. As a stimulus to exertion, few modes can be more free from alloy than the prizes given at such exhibitions. A man may place the winning cards over his chimney-piece with a pardonable honest pride; and without abating a jot of self-respect and true independence of character, he can take his prize, and show it, and still feel—

"That man with man, if rich or poor,
The best is he for a' that,
Who stands erect in self-respect,
And acts the man for a' that."

—R. FISH.

SALVIA PATENS AS A GREENHOUSE PLANT.

I HAVE no desire to depreciate "J. R.'s" remarks on this well-known flower, I merely wish to recommend it for another, and, I think, a more suitable purpose than either beds or borders. Its adaptability for either of these purposes has long since been found so slight as not to warrant its retention to the same extent as many other and more useful plants.

In the more northern part of the kingdom the blooming period of *Salvia patens* and *S. fulgens* is retarded till so late in the season that they are often overtaken by frosts or heavy rains, which speedily put an end to what little bloom might have been shown. These plants are, however, useful for the greenhouse or conservatory, where they make no mean display among other and more costly subjects. Last year I had a plant of *Salvia fulgens* 3½ feet high, and about 2½ feet through, which was greatly admired by many. Unfortunately it met with an accident which compelled me to do away with it.

I would recommend those who have not already tried *Salvia patens* for the greenhouse to do so without delay, as the clear bright blue of its blossom, as "J. R." says, is as yet not approached by any other ordinary plant. It will last for several

years, and will repay all the attention it may receive. Red spider and thrips are its greatest enemies, and require to be guarded against.—W. H. C.

THE GREEN FLY.

DURING certain seasons and under certain circumstances there is a marvellous development of insect life—a prodigality of growth over which our garden philosophers might well ponder. Take the common aphid or green fly for instance. It comes into life with the very dawn of spring, latent in the unfolding of every leaf, and endowed with the power of reproducing itself at a fearful rate; so much so, as not only to spoil the gardener's work, but to take from him the possibility of a return for his labour. Everything appears to be subject to the ravages of these dreadful insects. They moss over every Rose-bud, and do injury to every tender shoot on which they feed. They come by thousands, borne in upon us by the grey east wind, or they wake up from some snug hiding place where they have slept through the winter, waiting only a congeniality of temperature, warmth, or moisture, to burst out into life. Yes, they come by myriads; like the sands on the seashore or the drops of the ocean, they are beyond all count, all measurement.

They lead a happy, joyous, though silent life; not over-sensitive either, for they nestle close to, and clamber over each other as if they possessed not the feeling of touch; and they leave all about in their homes, as if for barricades, the self-like skeletons of their dead past, until, reaching some higher state of existence, they soar away with their beautiful rainbow-hued wings, to form new cities, new colonies of their own, on the shady side of some Liliun's broad leaf, wherever they are sure of quiet and subdued light.

"I have been a gardener for more than fifty years," said old Nathaniel Webster the other day, "but I never see'd the like of this summer, it beats all. Them green flies are on everything—Cabbages, shoot-ends of Peas, Hawthorn hedges, Gooseberry bushes, Apple trees, and Plum trees. And as for the forest trees, they are covered over thick with them; all among the underwood swarms, until the wood-cutters are well-nigh choked."

"Talk about the country," said Squire Banbury's cook, "one might just as well live in Leeds or Bradford, and have to get one's Greens from those 'lotment gardens down by the river side, they swarm over so—they are all alive. As for the Lettuces, they are no end of trouble. I shake them, and sweep with a hand-brush, and douse them up and down in bucketfuls of water, yet they are not clean. I could not eat one for my life; and after all my pains they come down unclean. Master says they have a boiled look; and the horse will not drink out of the bucket for days; and everything is the same. There ought to be a rule for gardeners to send things in clean. Why the Parsil that came for the salmon the day we had our party, made water thick as Yorkshire pudding-batter. And when we chop up Mint for sauce, no one knows what else!"

"Oh! I wish there was not such a thing in the world as green fly," said little Annie Taylor. "It is such weary work gardening. If I clean my poor flowers one day, they are all beaded over again the next. Hundreds come rushing to the funeral for every one I kill. Uncle Taylor says, 'I must smoke them or wash them with tobacco water.' But, then, one cannot easily do that with out-door plants, it would be too expensive even if there were no duty on tobacco."

Of all pests I think the green flies the most troublesome, a perpetual battle do they wage against all toilers in fields, and gardens, and hothouses. Snails and slugs do much mischief some seasons, destroying the early crops; but then it is chiefly to plants low down on the ground, and a few young ducks will lessen their numbers if not entirely destroy them. And if ducks cannot be used for such a purpose, and unfortunately they cannot always, for we so refine our tastes and ears that the sight and sound of ducks in our gardens are objectionable, however much we may enjoy them on our dinner-table; then the snails must be trapped, and caught, and carried away, which they can be very easily, for slugs have a foolish habit of leaving a milky trail on the soil, as if to point out where they are hiding.

An old garden in the country some few years ago was sadly infested with these little mollusks, to the great annoyance of the master, and the still greater annoyance of the gardener, who could get nothing to grow. All the tender vegetables were

cropped off as soon as they appeared above the soil. Two young girls of the family with whom the gardener was a favourite, volunteered to exterminate the enemy. Armed with gloves and trowels, for they could not bring their minds to handle the soft sticky things, and tin cans for their deposit, they went out in the dusky twilight for several evenings to pick up the slugs. Search was not necessary, for there they were on every path, and border, and bit of grass. At the close of a week's labour they were not very easy to find, a fortnight and the task was given up. The crops grew apace, and the gardener no longer lost his first and second sowings of Peas, Onions, and Lettuce.

Then, too, there are the caterpillars, those most disagreeable garden enemies, coiling themselves up in the youngest leaves, or seeking their way right down into the soft stem of some plant, just where the blossoms should spring from, and so causing destruction at the very beginning. But, then, caterpillars usually give some signs of their coming, some warning, if it be only a curled leaf, or bits of webby substance hanging about, and they, like snails, may be kept under by patience and industry; but the green fly comes down upon one in a moment without sign or warning, and when one comes home from a holiday, or rouses oneself up from a compulsory rest, it often is to find the work of spoliation done, all beauty gone, for the greedy creatures suck out the very life-blood from what they feed upon. At times in our great disappointments, and such come to most learners, and it is, perhaps, well that it is so, for the lesson we learn has often a weightier meaning than the lesson we are taught—well, at such times we are tempted to think that Nature must have lost her balance in insect life, or that some great disparity must have arisen in the numbers of the preying insect or the preyed upon; or that the seasons in their changes, their sudden extremes of heat and cold, bring death to one species of insect, while they quicken into life another.

We wonder if the rinderpest or some other destroying evil has come to those delicate little fly-catchers that used to dart up and down among the trees through all the long summer afternoons, doing good service for us while we rested from the heat. Or that the ladybirds have forsaken our garden for some more favoured retreat, or that some unknown enemies have fed too largely upon her larvæ, owing to a famine in their Egypt, so as to make few and far between the visits of those ever-welcome little *Coccinelle*.

From some cause or other the aphides have this year spoiled our gardens to a great extent. It is hopeless to attempt undoing the mischief they have done. Many a young girl has thrown down her tools in disgust, and bitter words have been uttered against the seeming uselessness of the poor green fly. And yet after all, as our good vicar says, it may be but another reading of the ancient sentence, "By the sweat of thy brow shalt thou eat bread." And no class of men know better than gardeners the truth of this; they need no microscope to read it; for them it is written in large letters all over, on grass, and hedges, and trees, and flowers, and fruit. And as the artist looking on a picture sees lines, and touches, and thoughts, and feelings the uninitiated cannot see, so the gardener, looking on a bunch of flowers, or a dish of Grapes, or a splendid Pine Apple, sees fine pencillings, proportions of form, and tokens of labour and thought which those who have never grown such things are blind to; and if he be a wise man he will find the curse against toil, spoken so long ago, in his vocation, at least, turning itself into a perpetual blessing.—MAUD.

ORCHARD-HOUSES.

MR. DRÉHAUT (page 73), while recommending spiral cordons, says that a group of five of them takes up only the room of one standard, and that you may have "varieties ripening from July to October, instead of ripening all at once."

Now, I purpose making a few observations on these last words, as they seem to me to have an important bearing on orchard-house culture. I would lay down the proposition that all fruit trees require a considerable amount of moisture both in the air and at their roots until they begin to ripen, after which time the less moisture the better. It is the carrying out of this maxim that I have always found the great and difficult problem in orchard-house culture. Were a house filled with a single variety of a single fruit the requisite amount of moisture could be given at the proper time. But as our houses are filled with all sorts of plants, some of which are ripening and require

drought, while others are swelling and require damp, it follows that either one or the other must be sacrificed, or else that a compromise must be made, the result of which is inferior flavour in the ripe fruit, and red spider on the leaves of the later varieties.

Now my mode of attempting to overcome the difficulty, for I do not pretend to have conquered it, is to grow my plants in pots, and shift the ripening varieties to the extreme sunny end of the house, leaving the ventilators near them partially open all night, and not syringing those plants at all. When the fruit is off the plants are put out of doors, and others moved onwards to supply their places.

Now these things being premised, we return to the consideration of five spiral cordons planted in a group, and ripening fruit from July to October. Are they to be syringed during these months or not? If they are, will the fruit be of good flavour? and if not, how is the red spider to be kept at bay?—G. S.

MESSRS. CARTER & CO.'S SEED FARMS.

A WEEK ago we visited these extensive grounds, and although that visit ought to have been made some days sooner to have seen many of the seed-plants at their full perfection, many more had just arrived at that state, so that after all what we missed was probably fully compensated by what the others had gained in beauty. Be this as it may, the sight was one that amply repaid a journey to Manningtree at the farther side of Essex, near which two of the seed farms are situated—namely, Jupe's Hill, and East House, Dedham, the one wholly devoted to vegetables, the other principally to flowers. On our way, however, from the station we pass over Jupe's Hill, and from this eminence catch a view of the lower ground, where whole fields of the most brilliant-coloured flowers are exhibited before us. Even at the distance of a mile bright scarlet masses may be discerned, and others of orange, and yellow, and white; while nearer at hand and farther off stretch bright green pastures and fields of golden corn, with Dedham church—an old country church, such as one loves—with its massive square tower, almost hidden by the trees in the distance. And now we come to East House farm, cropped with subjects so plentiful, so various, and withal so beautiful in their forms and colouring, that numerous as those noticed may appear, at least as many more must be left unmentioned, though scarcely less deserving.

Marigolds are grown very extensively, and although the object here, as with other plants, is simply to produce seed, and no special mode of cultivation is adopted to bring the flowers to a large size, both the lemon-coloured and orange African are very large and showy, having heads not less than 4 inches in diameter, and several measured even more than that. The orange variety is very rich in colour, and both would prove very effective in large borders where tall plants are grown; while for places in which such are not admissible, the miniature French kinds are well adapted, being very compact and seldom exceeding 6 or 7 inches in height. One, the Miniature Orange, has heads $1\frac{1}{2}$ inch across, and is very free-flowering, but still more showy are the dwarf gold-striped, which produce a profusion of rich brownish-crimson flower-heads striped and edged with golden yellow, and measuring when well grown about $2\frac{1}{2}$ inches in diameter. *Clarkia pulchella* in several varieties is also largely grown, as will readily be supposed from its being one of the best of hardy annuals both in point of beauty and free-flowering. Among the integripetala varieties there are a showy one called *carnea*, flesh tinged with pink; a fine double white; a dwarf variety called *Tom Thumb*, with large rose-coloured petals; and *marginata*, deep rose with a light edge.

Among *Godetias*, one called *The Bride*, is very fine; the blossoms are large, of a very delicate rose-colour, approaching to white, and deep red at the base of the petals, forming a ring of that colour round the centre of the flower. *Godetia Lindleyana*, which is well known, likewise covers a large space, as also does *G. roseo-alba*, pale rose, blotched in each petal with crimson, and which is in most profuse bloom. Messrs. Carter have also a variety which is a great improvement on the kind just named. *Godetia reptans alba* is very dwarf and pretty for trailing over rockwork.

Of *Lupins*, numerous varieties are grown, among which *Lupinus albo-coccineus* is one of the best; in this the flower-spikes are partly reddish purple and partly white. Another very pleasing variety, growing about $1\frac{1}{2}$ foot in height, and

having rose-coloured and white flowers, is called *L. elegans roseus albus*. *L. elegans carneus* is likewise a pretty sort, and there is a dwarf form of *Cruickshanki*, differing from it only in its height. Larkspurs of the tall branching kinds occupy a considerable space, and the blue is remarkably fine in colour; the same remark applies to the double scarlet Poppies; there are also large patches of other kinds, but now going out of flower. Indian Pinks in mixtures include many pretty varieties of different colours and markings, and *Petunias*, which are raised from seed by the thousand, have with but few exceptions large and showy flowers. Those known as Dunnett's hybrids, which are striped and variously marked with rich purplish violet, are of great excellence, while among selected sorts, *atroviolacea*, deep violet purple, and *magna coccinea*, purplish crimson, are very rich in colour and most desirable for bedding. There is also a variety called *Petunia viridicincta* with purple blooms narrowly edged with green.

Among dwarf annuals, *Cenia turbinata* with small bright yellow flower-heads, and its white variety, are certainly two of the prettiest and are well worthy of attention. Of *Brachycome iberidifolia*, or the Swan River Daisy, there are lovely masses, both of the blue and the white varieties, and of the two mixed. They are two of the most beautiful of dwarf half-hardy annuals, and cannot be too generally cultivated; in masses they are more effective mixed than when either is grown alone. Another Swan River plant, the *Acroclinium roseum*, of which there are both rose-coloured and white varieties, fills large quarters; and among other Everlastings there are several pretty varieties of *Xeranthemum* of various colours; one called *atropurpureum* forms a showy mass of double purple flowers; whilst of *Helichrysums*, which are much better for drying for winter, the stock includes fine large-flowered varieties of different colours.

Lobelias of the dwarf kinds suitable for bedding and pot culture, being such general favourites, it is scarcely necessary to remark receive much attention and occupy a considerable space; besides a fine strain of the deep blue *Lobelia Erinus speciosa*, *compacta alba* was noticeable as a neat dwarf white kind, and the light-blue-flowered *gracilis* as being well adapted for pot culture. *Nemophilas*, which are amongst the prettiest, and for almost all purposes the most popular of annuals, are grown by the acre, and when in flower they must alone have constituted a sight of rare beauty; but at the time of our visit the bloom was over and they were gathered into cocks, like hay, by the sides of the roads, along which, and in other parts of the seed farms, we were informed, they extended in belts to the length of eleven miles altogether.

Calliopsis of various kinds are also extensively grown, are at present very showy, and offer a considerable diversity, the predominant colours being yellow and brown, or crimson. They are very effective in masses. *Calliopsis elegans nana*, brownish crimson edged with golden yellow, is particularly so. Of annual *Chrysanthemums*, the New Double Golden is very free-blooming, dwarf, and very double; whilst amongst those exhibiting several colours in the same flower, *Chrysanthemum Burridgi*, white, crimson, yellow, and dark brown in concentric circles, is most beautiful. Some of the flowers measure $2\frac{1}{2}$ inches in diameter. The pretty and useful rose-flowered *Saponaria calabrica* and its white variety form large masses, which from their continuous-blooming character will probably remain long in beauty. There is also a variety with rose-coloured flowers having a narrow white margin. The white-flowered variety of *Silene pendula* is also pretty, as well as *Nemesia versicolor compacta*, which is densely covered with bluish lilac, rose, and white flowers, and being very compact is excellent for pot culture. *Viscarias* form fine masses; one of the most noticeable is that called *oculata Dunnetti*; another, *cæli-rosa nana*, is a fine, dwarf, rose-coloured sort, very even in height; but more beautiful than either is *Viscaria cardinalis* with brilliant crimson flowers produced in profusion. Among *Enocheras* are the large, yellow-flowered (*E. macrocarpa*, one of the most useful of all the dwarf kinds, and *E. bistorta Veitchii*, which is excellent for rockwork. *Mesembryanthemum glabrum* is another plant suitable for the same purpose, having bright yellow flowers $2\frac{1}{2}$ inches across.

Tropæolums, or *Nasturtiums* as they are called, are a speciality, and alone cover several acres, in masses of nearly an acre of a kind, but some varieties take up three times that extent of ground. Being all now in full bloom the effect is most brilliant, and where the flowers are scarlet perfectly dazzling. *Glory*, one of the climbing varieties, is conspicuous even from a long way off, by the splendid mass of orange

scarlet flowers which it forms; whilst of the Tom Thumb section, so dwarf and excellent for bedding, King of Tom Thumbs, with large bright scarlet flowers; and the crimson, yellow, rose, and spotted varieties are in most profuse bloom. One of the best of the spotted kinds is Beauty; Pearl is of a creamy white, and King Theodore, on the contrary, very dark. There is also a pretty rose-coloured sort having a bluish tinge.

At St. Osyth, the seed farm, which is even larger than that at East House, Dedham, is situated about eleven miles southward of the latter place measuring in a direct line, but the distance by road is, of course, considerably more. Here many of the annuals and other flowers already noticed are also grown in quantity. There are considerable breadths of Dunnett's hybrid Petunias, Asters and Salpiglossis in alternate beds, Zinnias, Carnations, Pansies, Auricula-eyed Sweet Williams, among which are many of great beauty, Sweet Peas, including a large piece of the Invincible Scarlet, *Viola cornuta* in splendid bloom, besides large quantities of the beautiful rose-coloured *Saponaria calabrica*, King of Tom Thumbs *Nasturtium*, very brilliant in colour and in very free bloom; Marigolds, both African and French, and Antirrhinums, one of which called *Cresea*, is of a beautiful dark crimson. The splendid scarlet *Linum grandiflorum* is also in profuse bloom; it is here sown without previously steeping the seeds, and comes up very well.

The white and lilac-flowered varieties of *Nycteria selaginoides*, as grown here, are two of the prettiest of half-hardy annuals (at least as to treatment), and are very dwarf and continue long in bloom. The little golden-flowered *Sanvitalia procumbens* also carpets the ground, and is studded with single or double flowers, there is also an orange-striped kind. We likewise noticed several hybrid *Leptosiphons*, which, being very dwarf and free-flowering, are well adapted for rockwork and edgings.

That most useful little orange-flowered plant, *Erysimum Peroffskianum* is well represented, and so, too, are the Clarkias; among these there is a pure white *Clarkia elegans*, also a showy double rose-coloured *integripetala* variety. Of *Eschscholtzias*, *aurantiaca* is of a uniform deep orange from the base to the top of the petals; and there are likewise an orange-striped sort, and varieties of *E. crocea* and *californica*, in which the petals are lapped over on the inside and toothed, being an approach to quilling.

The value of *Tagetes pumila* for bedding being well known, the mere mention of it will suffice, and the same remark applies to *Tritoma naria grandiflora* as an autumn-flowering border perennial. *Rhodanthe Manglesii*, of which there is a variety with larger flowers than the ordinary form, and the white-flowered *maculata alba*, together with the charming dwarf lilac *Abronia umbellata*, are just now very attractive. Here, too, there are several varieties of *Tropaeolum*, including one, *Lilli Schmidt*, with fine scarlet flowers, and a Tom Thumb variety of pyramidal habit. Among other subjects there are numerous seedling Hollyhocks, and about two acres of *Gladiolus*, most conspicuous amongst which is *Brenchleyensis*; but there are many fine light-coloured sorts as well.

Vegetables are grown both at Jupe's Hill and at St. Osyth, and though at no time when in the ground very attractive, they are least of all so when seedling. At the farm at Jupe's Hill, the extent of which is about two hundred acres, about one-tenth is in Peas. Among these the Peabody, a very prolific variety little more than a foot high, covers five acres; Dwarf Waterloo, a late branching Marrow, not exceeding 1½ foot high, a like extent; and Maclean's Little Gem, a very early wrinkled Marrow, a still greater area. Of Myatt's Improved Parsley there are three acres at St. Osyth, and at this place and Jupe's Hill, Pine Apple Beet, Carter's Champion, Maule's Late White, Snow's Winter White, and other kinds of Broccoli by the acre. Maclean's Premier Pea occupies between three and four acres, and though not more than 2 feet high, on some plants we counted as many as forty well-filled pods. It is a rather late sort of excellent flavour. Imperial Wonder Pea, a tall late wrinkled Marrow, is also extensively grown, as well as Laxton's Prolific Longpod, Epicurean, Yorkshire Hero, Kent Rival, and Carter's Leviathan, the last a new late Pea to be sent out next season. Carter's Champion Runners, judging from the specimens we saw, are of a very prolific race. Of Large York Cabbage, there is a piece of about eight acres, and a like extent of Imperial Oxheart; of Little Pixie two acres; of Asparagus for roots two acres, and similar areas are devoted to Marjoram, Thyme, and other herbs. Musselburgh and Ayton Castle Leeks, Onions, Carrots, Rat's-tail and other Radishes, Celery, Sims's Mammoth

and Keys's New Early Prolific Tomatoes also fill large quarters, besides which there are frames filled with Lynch's Star of the West, and other Cucumbers for seed.

THE COLEUS FOR TABLE DECORATION.

WITH good management, *Coleus Verschaffelti* can be grown in small pots as low in the scale as 72's, but 60's are a most useful size. Beautiful compact plants can be grown in this sized pot, clothed with healthy foliage, so as almost to hide the pot altogether. All the care required is to keep the plant clean, and stop at every joint, growing on in plenty of heat and light near the glass. Cuttings strike freely in a gentle heat at any season. When struck, pot off at once in the sized pot you require. I am aware the plant can be grown to a large size; but in its liliputian state I consider it looks better, and is adapted for a greater variety of purposes. *C. Blumei* is also admirably adapted for the same purpose, but lacks that rich appearance at night *Verschaffelti* possesses; still, for variety's sake, I would recommend a few of the former being grown. It is a plant fast going out of cultivation, as I seldom meet with it now. I would also mention another plant which forms a most lovely object in midwinter when grown in very small pots, and is of easy cultivation—*Oxalis corniculata rubra*. To those who have small vases to decorate, let me advise them to grow a few dozens of this red-leaved Sorrel, and I am sure they will find it useful.—J. E. (in *The Gardener*.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

THIS week will bring a press of business in the kitchen garden. All the open ground having been duly filled with the various *Brassicas*, the late crops of *Celery* should be put in forthwith, and the early crops carefully soiled. *Cabbage* must be sown directly for the main crops next summer. A little *Corn Salad*, and a little *Chervil*, and the various *Cresses* for autumn use, may now be sown. *Endive*, continue to plant on elevated beds, well manured. Some should be so contrived as to receive hoops and mats, or other covers, in winter. *Onions*, sow the Welsh and Deptford for drawing young through the winter, also for transplanting in March for bulbing. Let all forward *Onions* have their tops bent down in order to get them shortly off the ground, which should then be manured, and filled with Coleworts, in rows 15 inches apart, allowing 10 inches between the plants. *Peas*, take all care of the late Marrows, let them have the best of stakes, and be sure to top them when they reach the points of the stakes. *Parsley*, if any is becoming too gross and forward, let a portion be mowed down forthwith. This is an old plan, but a very excellent one. A top-dressing of soot, blended with dry soil, ashes, or sawdust, may be instantly applied, this will produce by October fine young *Parsley* for garnishing and of a better colour than the older leaves. *Spinach*, sow the Prickly for supplying the table from November till next May. *Tomatoes*, dress, and see that all *herbs* are housed, and the *Chamomile* flowers picked when perfectly dry. If the ground is beaten with heavy rains, its surface will become too compact when dry weather sets in. The surface should, therefore, be stirred by forking over, or otherwise it becomes too hard for working freely. In many cases, farmyard manure, the most desirable of all, cannot be readily obtained, and the gardener has to substitute whatever vegetable refuse he can collect, weeds included; the latter can be easily rotted, with the exception of the seeds, of which enough to crop the ground manured usually escape decomposition, and in a very wet time these weeds, chiefly of the annual description, will not be destroyed by hoeing; they are, as it were, moved and transplanted by the operation. Groundsel, for example, may be tossed frequently on the surface in wet weather, and will survive, its roots being rolled up in balls of mud. Under such circumstances, when hoeing proves ineffectual, digging is to be preferred, as being best for the ground, which afterwards retains a fresh, clean appearance for a considerable time with little or no additional expense.

FRUIT GARDEN.

Continue to cut off runners from Strawberry plants, where increase is not required. Attend to the bottom beat for the late crops of Melons, any stagnation in this respect will render them a prey to thrips, eanker, and other evils.

FLOWER GARDEN.

Pillar Roses out of bloom should be carefully pruned; cut out a moderate portion of the old and young wood, so as to thin

them sufficiently to prevent the wind from blowing them down. The wood left should not be shortened, but should be allowed to grow during the season. Climbers on walls, &c., should be fastened in, and occasionally pruned to prevent them from becoming too thick. As weeds increase rapidly on gravel walks in showery weather, take particular care to keep them clean, frequently rolling and sweeping them. Hoe and rake borders and beds as often as they require it. Keep herbaceous plants neatly tied up, removing all dead flowers, but do not cut the plants down to the ground until their stems have begun to die off, as it weakens the plants for another season. Propagation by cuttings is now a most important business in this department. If time can possibly be spared, let there be no delay in this respect, not only mass flowers, but many in the mixed beds and borders, require to be annually propagated in order to secure a continuance of them. Such are sometimes termed imperfect perennials, of which instances may be adduced, in such plants as *Pentstemon campanulatus* and its varieties, *Chelone barbata* (still a useful plant), the *Antirrhinum* in great variety, and *Coreopsis lanceolata*, *auriculata*, and better still, *C. grandiflora*. *Mimulus atroseus*, too, requires looking after, and deserves it. Many of these are old plants, but they are still useful in contributing to the general effect; at least, cuttings of *Pentstemon gentianoides* should be secured betimes, if well established they will flower sooner than seedlings. The *Maurandya*, the *Lophospermum*, *Rhedeochiten*, &c., as before observed, should be well established in their store pots before winter. Ten-week Stocks may be sown for pots, and a little Mignonette every week until the beginning of September, for pots. Let Rose-budding proceed, and for common purposes we would recommend such as the old *Crimson Perpetual*, the *Bourbon Queen*, *Phoenix*, *Armosa*, *Lafayette*, *Aimée Vibert*, &c. These, although not of the exhibition class, are, nevertheless, most useful about the pleasure grounds of a country seat.

GREENHOUSE AND CONSERVATORY.

The drenching rains which have been so prevalent and general of late, will begin to cause a little anxiety amongst plant-growers, as to the condition at root of some of the New Holland plants, *Ericas*, &c., which are placed out of doors. These matters are a severe test of the efficacy of the various modes of drainage, and frequently teach the young beginner a serious lesson. Cold pits or frames will soon be in request, if at hand, if such weather should continue. Common structures of this kind are, after all, much safer when placed under proper regulations, than trusting tender or young stock to the mercy of the elements unprotected. Give every attention to flowers for a late display. Everything intended for this purpose should be thoroughly established in the pot, late shifting will never answer here. Now that all plant-structures are nearly empty, or that the plants in them may be moved from one house to another without sustaining any injury, painting and glazing should be proceeded with; in fact, all kinds of repairs should now be forwarded, and if the flues (should such exist) require sweeping, let this be done. If any alteration is required in hot-water apparatuses this should at once be completed. Badly-set boilers, which consume fuel without producing much benefit, should be reset on a right principle, and badly-constructed boilers entirely removed. Nothing during the time of severe frost is so disheartening to a gardener as to consume fuel without receiving its full equivalent of heat. This is a most important subject.

STOVE.

Little fresh can be added here at present. Take every means in due time to harden or rather to ripen the growths already made. It is rather too late to defer this until September. Give air very freely indeed at all times, more especially when the warmth of the natural atmosphere is a guarantee. Nevertheless, shut up abundance of solar heat, with a good amount of atmospheric moisture betimes in the afternoon.

PITS AND FRAMES.

Cuttings put in a few weeks ago will now be rooted, and should be removed to a more airy situation for a few days to harden off. Fill up the empty space again with fresh kinds, no time must be allowed to pass by. Go on propagating all the new and better kinds of *Verbenas*, *Petunias*, *Heliotropes*, *Scarlet* and other *Pelargoniums*.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

THE heavy rains of the 6th so baked the surface of the ground, that it became necessary, weeds or no weeds, to loosen

the soil among all young crops that the hoe or the fork could have access to, in order to let a little air in and keep the scorching heat of such days as Saturday out. It is seldom that we wish to see a rake at work, except in making the soil fine for small seeds; but there is one instance before us in which we might have found it better to have used an iron rake, and that is in a small piece of Asparagus, well hoed and the weeds left between the rows. These weeds, and some of them of a fair size, too, are planting themselves most comfortably, owing to the showery, dull weather, and will want another hoeing in a bright day to let the sun shrivel them out of sight. If we had had some salt we would have saved the hoeing, and that is one of the advantages of salting this vegetable, that it destroys the weeds as well as gives the plant what it enjoys in its natural habitats.

Cauliflower.—We forget now how many successions of this we have at present; but from digging down a piece of Strawberries we were enabled to plant out a good piece, which will afford a fine autumn supply, and the latest will stand long under protection. We generally plant one piece later still, either where we can protect it, or to be lifted and placed under protection. At this season we give less room to the plants, as they will not grow so strong—say generally 18 inches between the rows, and from a foot to 15 inches in the row. There is no other kind of Greens or Broccoli that equals the Cauliflower if it can be had good and compact. The latter matter is sometimes lost sight of at country cottage shows, where some huge parasol heads, so run that you could push your fingers or even your fist into the openings, are expected to beat compact, firm heads, 5 or more inches in diameter. This is less to be wondered at when those of refined taste are so often led to give the preference to quantity rather than quality.

Spinach.—On ground from which Potatoes have been raised we have sown the main winter crop, in rows from 15 to 18 inches apart, and it is not too soon to do so on heavy, late land; on light, early soils it would be time enough to do so about the 28th. We will sow a little piece more then, as it is always best to be sure, as when too forward it is apt to suffer from early frosts, and the two sowings afford a better succession in the spring. Where ground can be spared it is well to have enough of this tender delicious vegetable, as, though it exhausts the soil, yet when it is cut down when strong and allowed to lie a day or two, and is then trenched down, it returns to the ground a good moiety of the nourishment that it took away. The Prickly or Flanders Spinach is the best for present sowing. Where there is much packing of vegetables and fruit to a distance, plenty of Spinach comes in useful for packing material.

Onions.—Sowed the Tripoli and White Spanish for the main winter crop for salading, and for planting for the first crop in spring. If we have a fine autumn, even in our stiff soil, these will be over early, and will become too large even for salads; but if the autumn be shady and cold they will not be too early. We shall, therefore, sow a piece more at the end of the month. Have our readers noticed how weakly most of our seedlings come at this season of the year compared with the robustness they assume in April and May, when the sun is approaching his greatest strength, instead of receding from it?

Turnips and Radishes.—Sowed a good breadth in rows, the Radishes in intermediate rows, and to be cleared out before the Turnips want the room. Will have another small sowing towards the end of the month. The latter, especially, will produce but small Turnips in winter, but they will be firm and sweet. It is rarely that Turnips should be used at table larger than a middle-sized closed fist. The sweetness will greatly depend on youth and rapid growth. As fast as we could clear ground we filled it thickly with Coleworts, Borecoles, Broccolis, &c., as it is much more pleasant to cut them up in spring than to go without a sufficient supply.

In the stimulus given to the higher branches of gardening, especially floriculture, some of the rising race of gardeners are apt to think the kitchen garden beneath their notice, and the usual results as to grumbling and pinchings follow. Let it be clearly understood, that in all families where the exception is not clearly made vegetables must ever stand first, fruit second, and plants and flowers third. Whoever ventures so to transpose their position as to give vegetables the third place, will most likely be reminded in no very pleasant way of his error.

Peas.—Late crops promise to be fine, and the rains have made some sorts grow so fast, that we have been obliged to hold them up by poles connected with strings, as when the haulm is broken or twisted the Peas do not swell regularly.

When the stakes are thus insufficient, it would be better for the crop to be on the ground unstaked.

We have lately alluded to some of the best-flavoured, most prolific kinds. We regret to say, that though admiring Veitch's Perfection for the size of pod, and size of pea, and rich flavour, we have never, though trying some little new mode every year, succeeded in filling the basket from it as we would wish. Many of the blooms seem also to become barren. Some people prefer the flavour to such fine kinds as *Ne Plus Ultra*, the height of the latter being the chief objection to it, and the large pods of Perfection look very handsome in the basket, but with us it yields those fine pods too sparingly. Will some more successful correspondent tell us how to get our baskets better filled from a row? We would be well satisfied, if in prolific bearing it came considerably behind such kinds as Dickson's Favourite, Knight's Dwarf Marrows, &c.

Potatoes.—We have now taken up our earliest, and we are sorry to find that within these few days among the later kinds the dread Potato disease has made its appearance. If those taken up keep sound, or those still sound in the ground remain so, we shall have no reason to complain much; but as fine a sample of stored Potatoes as we ever saw, took the disease long after this, and when stored in thin layers, too, last year. Owing to the moist character of the season, and frequency of muggy days, we could do little good in planting anything between Potatoes this year. In general, it will be found the best plan to prick out Coleworts, Borecoles, Broccolis, &c., and lift and plant when the ground is cleared. Of course, we are not speaking of such happy cases, where a quarter can be left pretty well in fallow in the first part of the year, to receive these winter crops as soon as they are strong enough. We believe that on the whole that is the best, the most economical, and even the best-paying plan; but if the gardener has less than an acre of cropping ground, and must obtain the greatest possible quantity of good vegetables from it, then, willing or unwilling, he will have to crop so as never to have a yard of ground long empty.

FRUIT GARDEN.

We stated that in *summer pruning and pinching* we left a few shoots to carry on the growth. We have had the most of these now removed, to let the sun and air to the fruit, and to perfect more fully the buds for next season. In this matter we treat very differently young trees, and those that are as large as we wish them to be. In the case of young trees which we wish to bear fruit in proportion to their size, and that as soon after planting as possible—in the case of Pears, Apples, Cherries, Plums, &c., as soon as the summer shoots are 9 or 10 inches long, we thin where too abundant, and merely nip out the point of the shoots left with the finger and thumb, and had we nothing but fruit trees to attend to, we would use little else but the finger and thumb to do our pruning. Most likely these shoots will push again from near the fruit, and they may be stopped again, and of these we will make little mention, as most likely we will cut further back than the first pinching at the autumn or winter pruning.

This thinning and this point-pinching throw the sap, as it were, back on the tree, and thus we shall generally obtain two, three, and on to half a dozen fruit-buds formed at the lower end of the summer shoot, whilst if we had not stopped it, we could scarcely expect a fruit-bud to be formed until the following year. For this purpose, the stopping the shoot at that length is a much better plan than stopping it further back—say from 3 to 6 inches distance from the last year's wood. This would be a good plan when we wished to change that one shoot into two, three, or four more, and thus form a head, or fill a gap sooner; but it would not be equally good if early fruit-buds were our aim.

The check given to the top growth would at first be severe, the vital forces accumulated in branches, stem, and roots would at once be arrested in their natural outlet, and the repetition of such a process would gradually lessen the power of these forces, and give us growth diminished in vigour and luxuriance. This first stopping, however, of which we are speaking, though damming-up for a time the natural outlet, does not do much to arrest the natural vigour of the plant; it merely, as it were, puts it on its metal, and ere long the plant shows it will not be easily beaten, by finding an outlet for these accumulated resources, in giving you several shoots instead of one, but shoots that for that season will be furnished with wood-buds alone. Hence, in such trees the different result that may be expected from merely topping a summer shoot, say in July, and cutting it back to 2 or 3 inches in length. In the one case

you may expect and will often obtain fruit-buds formed at the base of the shoot—at any rate there is almost the certainty of having them so formed in the following year; in the other case, the closer cutting is almost sure to be followed by the tree in self-defence throwing out more shoots from the buds on the shoot so shortened.

Now, in the case of fine, *deciduous bush, or pyramidal trees* that have grown as large as we wish them to be, if there was a deficiency of fruit-spurs we would, even as respects them, follow the same point-pinching plan, and cut back merely when all danger of pushing fresh shoots was over; but if the tree was bristling with fruit-spurs, we would thin out these shoots more liberally, taking those away first from the top of the tree, so as to throw the strength of the tree more downwards, as the branches near the ground are apt to become weak soonest, and we would top the points of shoots chiefly when we wanted fruit-buds to accumulate at their base, or where a new shoot was wanted to be laid in. We should only be careful in July and the beginning of August to leave as many shoots growing on such trees as to avoid all danger of the fruit-buds being started into growth, instead of maturing for next season's fruit-bearing.

The whole matter will be simplified if it is borne in mind that the sooner and more thoroughly you remove summer-made shoots, the more likely are you to have an abundant second weaker growth, the more likely are you to prevent fruit-buds forming in such shoots, and the greater the probability of starting into wood-growth what otherwise would have been consolidated and ripened into fruit-buds. It is always best to stop an extra-vigorous shoot early, because such a shoot is not only liable to rob the rest of the tree, and thus deprive it of its equal balance, but the shoot takes a long time to become fruitful, whilst this fruitfulness is more quickly obtained by securing two, three, or more well-ripened moderately-sized shoot instead of one.

In the case of trees that are not so fruitful as is desirable, owing to over-luxuriance, it is well to mark them now, that they may receive less or more of root-pruning after the fruit is gathered. The earlier this is done the more will it increase the fruitfulness of the tree for the succeeding year; but if done before the fruit is gathered the fruit will be almost sure to suffer in size or quality. This cutting of the roots is going at once to the root of the matter; it secures more moderate growth, on which the sun and air can thoroughly bring into operation their maturing powers. Root-pruning, however, is chiefly useful when the roots are going too deep, and thus absorb moisture of a more crude nature than that which is obtained nearer the surface. In all cases where the roots are under control and near the surface, and are kept there by waterings and mulchings, the strength of the tree, though not so quickly, will be as efficiently regulated by summer pinchings and prunings as by the lifting or cutting of the roots. Between roots and branches there will ever be a reciprocal, correlative, sympathetic action. Reduce the growing, evaporating surface, and you will gradually lessen the demands on the roots, and they will send up a smaller supply of sap, which will thus stand all the better chance of being well elaborated.

To have this effect, however, the pinching and the pruning must take place in summer in the period of growth. We have seen many cases where it was attempted to neutralise over-vigorous growth by a free use of the saw and the knife in winter. Such a plan almost universally fails. The plant in self-defence will find a vent in strong, young shoots next summer from the stored-up resources, the result of unchecked growth in the season preceding. Of course the plan of severe winter-pruning is all well enough when we wish to have new wood for our tree, and to train, nip, and prune as we will. Much, however, would be gained were the belief more general that it is on summer-management and not on winter-pruning that we must depend for securing moderate growth and extra fertility in our fruit trees.

This simple principle understood will enable us at times to modify our operations, to make the most of circumstances. Thus, noticing that a vigorous tree or shrub severely pruned in winter would in self-defence attempt to restore the balance between roots and tops by a vigorous growth in the following summer, has led us several times in moving rather larger fruit and forest trees in the end of autumn, or the beginning of winter, to deviate a little from the ordinary course, and always with a seeming advantage. Unless such trees have been previously prepared, and a mass of young roots is formed round a manageable ball, it is impossible to take up the trees without

doing such injury to the roots as would destroy the previous balance between roots and branches, and, therefore, it is not uncommon to thin or shorten the heads of the trees, so as to lessen the disparity that otherwise in this respect would and must exist. Now, reasoning on the simple principle referred to, in moving such trees without preparation, we have not only seen the importance of lessening the top of the tree, so as to give the lacerated roots less to do; but the still greater importance, after a vigorous growth in summer, to do this teatinning and pruning early in autumn, a month or two at least before transplanting. The lessening of the outlets, as it were, after the summer growth, and whilst the plant was still growing freely, caused an accumulation of extra resources, ready under favourable circumstances to show themselves in fresh roots and twigs. In the hurry, the argument may not be so clear as it should be, but we can bear testimony to the benefit to be derived from the practice.

In conclusion, then, severely pruning in winter a luxuriant fruit tree, will not much lessen its luxuriance, as the resources stored up in the stem and roots will find an outlet. In taking up and transplanting trees, what pruning is necessary for the head should be given early in autumn, that the forces thus husbanded may be developed in fresh growth below and above ground.

Other matters much the same as last week, and chiefly of a routine character.—R. F.

COVENT GARDEN MARKET.—AUGUST 14.

TRADE in choice productions has much fallen off; other articles remain nearly as before. There is a large amount of foreign produce on hand, so that dealers must submit to lower prices, as we may shortly expect a large addition, in the shape of English Plums, to those already here. Pears consist of Jargonelles, Bon Chrétien, and Beurré d'Amanlis.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	1	6	Melons each	3	0	5	0
Apricots doz	3	0	4	0	Nectarines doz.	4	0	8	0
Cherries lb.	0	6	1	6	Oranges 100	8	0	14	0
Chestnuts bush.	0	0	0	0	Peaches doz.	6	0	10	0
Currents ½ sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black doz.	5	0	6	0	Pine Apples lb.	4	0	0	0
Figs doz.	3	0	6	0	Plums ½ sieve	2	6	5	0
Filberts lb.	1	0	0	0	Quinces doz.	0	0	0	0
Cobs lb.	0	0	0	0	Raspberries lb.	0	0	0	8
Gooseberries .. quart	0	4	0	6	Strawberries lb.	0	6	1	6
Grapes, Hothouse, .. lb.	2	0	4	0	Walnuts bush.	10	0	20	0
Lemons 100	8	0	12	0	Green per 100	1	6	2	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	3	0	6	Leeks bunch	0	3	0	0
Asparagus bundle	0	0	0	0	Lettuce per score	1	0	0	0
Beans, Kidney, ½ sieve	4	0	0	0	Mushrooms pottle	2	0	3	0
Scarlet Run, ½ sieve	4	0	0	0	Must. & Cress, punnet	0	2	0	0
Beet, Red doz.	2	0	3	0	Onions, per doz. bchs.	5	0	0	0
Broccoli doz.	2	0	3	0	Parsley per sieve	3	0	4	0
Brus, Sprout ½ sieve	0	0	0	0	Parsnips doz.	0	2	1	0
Cabbage doz.	1	0	1	6	Peas per quart	0	6	1	0
Capecums 100	2	0	3	0	Potatoes bushel	2	0	4	0
Carrots bunch	0	6	0	8	Kidney do.	3	0	4	0
Cauliflower doz.	3	0	6	0	Radishes doz. bunches	0	4	1	0
Celery bundle	1	0	2	0	Rhubarb do.	0	4	0	0
Cucumbers each	0	4	0	8	Savoy bundle	0	4	0	0
pickling doz.	2	0	0	0	Sea-kale do.	0	0	0	0
Endive doz.	2	0	0	0	Shallots basket	0	8	0	9
Fennel bunch	0	8	0	0	Spinach bushel	2	0	3	0
Garlic lb.	0	8	1	0	Tomatoes per doz.	2	0	3	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	0	0
Horseradish .. bundle	2	6	4	0	Vegetable Marrows ..	1	0	2	0

TO CORRESPONDENTS.

*. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

Books (T. B. Willey).—The best book on landscape gardening is Mr. Kemp's "How to Lay Out a Garden."

TREE LABELS (E. August).—There is no novelty in your labels, which are already made both in zinc, porcelain, and earthenware.

GREEN MATTER IN DYEING VAT (Calico Printer).—The green matter you find as a scum on the surface of your sledge is the voidance of the mussels which feed on green Sea-weed.

REN SPIDER ON VINES (W. P. Maddison).—In last week's number, at page 105, you will find your case fully answered.

ORCHARD-HOUSE AND FOWLS (S. L. T.).—Our own opinion is that the fowls would eat your fruit as well as destroy the woodlice. If you want to get rid of the woodlice trap them with small pots filled with moss or hay, in which they will take refuge.

VICAR OF WINKFIELD PEAR (A Constant Reader).—The Vicar of Winkfield is not worth space on a wall if your room is limited. If your Golden Beurré is the Brown Beurré, we would recommend you to place it on the wall and leave the Vicar of Winkfield where it is.

ESTIMATE OF ROSES.—"In the list of Roses given in your last number, Mr. Fliton appears to have entirely forgotten *Senateur Vaisse*, the best Rose in the world, *Général Jacqueminot*, *Madame Charles Crapet*, *Madame Wood*, *Madame Julie Daran*, *Souvenir de Comte Cavour* (Margottin), *Prince Leon*, and the superb *Baron Maynard*, the very best white Rose in cultivation.—F. D. D'ERVISE."

SPOT ON PEAR LEAVES (A. Atkinson).—It is not the work of an insect but of a fungus, to which the Pear is liable in seasons like the present, which are unusually wet, with a great absence of light. Drainage will assist you more than anything.

SARRACENIAS (Robin Rowe).—We shall see what can be done about *Sarracenia* in a week or two.

ANACHARIS ALSINASTRUM (An Old Subscriber).—"The only way" of which you make inquiry, is to have the pond emptied, and all the mud at the bottom well scraped out, as thereby everything belonging to the weeds must be taken away.

AUTUMN SHOWS (G. Moss).—Crystal Palace, September 10th.

TREES FOR A BLIND (Anxious Inquirer).—Plant Black Italian Poplars, which will grow quicker and taller than anything else suitable for the purpose. Mix among them some common Laurels, which will grow up and keep the bottom bushy when the trees get up. You might mix Scotch and Silver Firs among the Poplars. If you experience irregularity in procuring the Journal through your bookseller, order it direct from the office.

AMERICAN BLIGHT (An Amateur).—Take a hard brush like a plate-brush and brush them off. By keeping a close look-out after these pests as they make their appearance, you will check their progress; but it is not possible by any process to eradicate them.

NECTARINE CRACKING (T. H. Price).—The Nectarine is the Stanwick, which is proverbially liable to crack. What is the condition of the roots? Are they, or have they been kept too dry at the roots, and the atmosphere of the house relatively moist? These conditions would cause the fruit to crack.

SPOT ON GRAPES (A Small Man).—Are you quite sure the drainage is all right, or have you kept the house too close and humid? Give plenty of air, and protect the border from those heavy rains that have been so prevalent this season.

WHEELBARROWS.—"G. E." wishes that some correspondent would kindly tell him the best form and dimensions for a garden wheelbarrow.

LILIUM LANCIFOLIUM HARDY (G. McD.).—Here in the south, *Lilium lancifolium* and its varieties would be considered hardy herbaceous plants, and admissible in a collection of these at an exhibition; and we cannot but believe that it is equally hardy with you. Send your seedling *Pelargonium* to the Floral Committee of the Royal Horticultural Society, and it will have its merits or demerits well weighed.

GARDENER LEAVING (Stranger).—The autumn would be the season for a gardener to leave his place, so as to cause the least inconvenience in the establishment. Crops are then gathered in, and the active operations of the garden are then fewer than at any other season. Plant Ivy and Holly in September.

PEACH TREES UNDER GLASS (A. S. T.).—Your Peach trees will not suffer in the least by the alteration you intend to make in the house.

SEA-KALE BEET (B. L.).—It is the thick fleshy stalks of the leaves that are blanched and eaten like Sea-kale. They are blanched either by earthing them up like Celery or Cardoons, or by covering them with Sea-kale pots.

ERECTING GREENHOUSE (W. W.).—It is not easy for us to answer the question you put. If you apply to any of the horticultural builders who advertise every week in this Journal they will furnish you with an estimate and plan. Much depends on the style of the work as to what the cost will be.

PRIZES AT EXHIBITIONS (Sutton Abbott).—There being no restriction in the rules of your Society as to how many prizes an exhibitor may take in class in which he exhibits, you are entitled to all that have been awarded you. Where it is intended that no exhibitor shall take more than one prize in each class, it ought to be stated so in the schedule, as is done in that of the Royal Horticultural Society.

GREENHOUSE GLASS AND FLUE (W. O.).—21-oz. glass is quite strong enough for any ordinary greenhouse where the squares are not more than a foot wide; but if you exceed that width and length, 24-oz. will be better and safer. The single flue will be amply sufficient to keep out frost, but not to force.

HONEYDEW (Goddess).—The following from the "Cottage Gardener's Dictionary" affords the information you require:—"Hail attended by dryness of the soil, as during the drought of summer, is very liable to produce an unnatural exudation. This is especially noticeable upon the leaves of some plants, and is popularly known as honeydew. It is somewhat analogous to that outburst of blood, which in such seasons is apt to occur to man, and arises from the increased action of the secretory and circulatory system, to which it affords relief. There is this great and essential difference, that, in the case of plants, the extravasation is upon the surface of the leaves, and in proportion, consequently, to the abundance of the extruded sap are their respiration and digestion impaired. The various successful applications of liquids to plants, in order to prevent the occurrence of the honeydew and similar diseases, would seem

to indicate that a morbid state of the sap is the chief cause of the honeydew, for otherwise it would be difficult to explain the reason why the use of a solution of common salt in water, applied to the soil in which a plant is growing, can prevent a disease caused by insects. But if we admit that the irregular action of the sap is the cause of the disorder, then we can understand that a portion of salt introduced in the juices of the plant would naturally have an influence in correcting any morbid tendency, either preventing the too rapid secretion of sap, stimulating it in promoting its regular formation, or preserving its fluidity; and that by such a treatment the honeydew may be entirely prevented we have often witnessed when experimenting with totally different objects. Thus we have seen plants of various kinds, which have been treated with a weak solution of common salt and water, totally escape the honeydew, where trees of the same kind growing in the same plot of ground not so treated, have been materially injured by its ravages."

HEATING A CONSERVATORY (T. H.).—One of Hays's middle-sized stoves would keep the frost out of the conservatory, 39 feet by 9 feet. We presume it to be a lean-to. Of course you are aware that you must purchase the prepared fuel. We would advise even then that a small gas-pipe should go from the top of the stove. A round or square stove of iron—say 15 inches wide, and at least 30 inches high, with a pipe through the roof, would also suit you, more especially if the fire-box stand free of the sides of the stove all round. That, of course, would burn coke or common cinders. We fear prepared fuel, as an essential, will lessen the usefulness of stoves that need it, as people are apt to forget such little matters until the frost comes suddenly and does the mischief. We consider anti-corrosion paint first-rate for common purposes; but we would use it chiefly for the outsides of glass houses, as lead paint inside is more easily washed.

HERBACEOUS PLANTS FOR BEDS (Chili).—The Evening Primrose (*Oenothera macrocarpa*), makes a fine bed of yellow, and continues long in bloom. *Agrostemma coronaria* is also a fine plant for a bed; it has bright rose crimson blossoms. A bed of *Antirrhinum* is also excellent; they are of many colours, and look well mixed or in a bed of one colour. *Salvia nemorosa*, having silvery foliage and numerous bluish purple flowers continuing through the summer, is fine for a bed. *Delphinium Belladonna*, with sky-blue flowers, is one of the very best blue-flowering bidders. *Lythrum roseum superbum*, with rose-coloured blossoms, is fine for a bed in early summer, but does not do for autumn. *Fuchsia globosa* is very pretty in a bed in autumn, being of a fine scarlet and violet. *Mimulus cupreus* does well in rather shady, moist situations, and has handsome yellowish orange flowers. Few plants are equal to herbaceous Phloxes, which may be planted one colour in a bed or in mixtures. Pyrethrums, of which there are many kinds and colours, are fine for beds. Pentstemons have a fine effect in a bed late in summer and in autumn, and *Dianthus hybridus Marie Paré* is the best of the white hybrid Pinks for a bed.

GLADIOLUSES IN POTS AFTER BLOOMING (H. Foy).—When the foliage becomes yellow take up the bulbs, lay them in a dry place, and when dry remove the stalks, and store the roots in dry sand in a cool place after cleaning them. The plants should not be much watered after flowering, but must be gradually dried off.

WINTERING GLOXINIA TUBERS (Idem).—After flowering the plants should be kept dry, and if the pots are placed on a cool bottom in any house from which frost is excluded, the tubers will winter safely. They also keep well in a cellar until February or March, and may then have all the old soil shaken from the roots, and be fresh potted and placed in a hotbed.

HARDINESS OF LILIUM LONGIFLORUM (Idem).—*Lilium longiflorum* succeeds admirably in a cool pit during the winter if the pot is plunged to the rim in coal ashes; and it will stand the winter uninjured out of doors if the pot be plunged to the rim in coal ashes in a sheltered situation, and a thin layer of short litter spread over the surface.

WELFENIA CARANTHILICA CULTURE (M. J. E.).—The plants may be potted in a compost of turfy loam, leaf mould, and sand in equal parts, the pots being well drained, for the soil must be kept moist, and good drainage is therefore essential. The plants may be placed out of doors in an open but not very sunny situation, and the pots plunged to the rim. They should have an abundant supply of water, but the soil should not be kept saturated. The pots may be withdrawn in autumn, and set on ashes or plunged in them in a cold frame, where they should have abundance of air, and protection from these frosts succeeding a warm period, which are the chief evils cultivators of plants from elevated situations have to contend against. To save trouble you may plant them in a sheltered situation out of doors in rich turfy loam, leaf mould, and sand. They will require water frequently during dry weather.

PRUNING LAURUS NO. 2 ROSE (Idem).—This Rose is rather impatient of pruning, and should not be closely cut. The old wood should be cut out as well as some of the shoots, if these are too close together, some of them having the ends merely shortened a little, so that a uniform head may be produced.

VARIOUS (—).—All the Aucas are perfectly hardy, and Aneuba himalaica will probably hybridise with *A. japonica*. *Desmodium racemosum* is hardy, succeeding in an open situation in a compost of peat, loam,

and leaf mould. *Begonia Veitchii* we do not know. *B. magnifica* would survive the winter in a warm greenhouse, the soil being kept dry.

PROPAGATING AND WINTERING PELARGONIUMS (Notice).—The one-light frame will not be of any use, as cuttings taken now and put in boxes three-parts filled with sandy soil, and to the brim with sharp sand, will strike freely out of doors in the full sun, the soil being kept moist. When cold weather sets in the cuttings may be moved in the boxes to the room without fire, and being kept dry and afforded plenty of air they will live through the winter if taken to a place of safety during severe weather. Just enough water should be given them occasionally to keep them from drying up, otherwise they cannot be kept too dry. The stable, the room, and the cellar will do for the old plants, but these must be kept from frost, and all decayed leaves and stems should be pricked off as they appear. Your frame will answer admirably for *Calceolaria* cuttings if placed in a warm situation and over a bed of good rich soil. Two or three inches of sand may be placed within the frame, and the cuttings put in early in October, 14 inch apart. A good watering should be given, and the plants should have all the air possible, using the lights only at night and during heavy rains. In severe frosts it will be necessary to cover the lights with two or three mats, and any other covering that may be at hand. You will find full particulars as to the propagation and wintering of bedding Pelargoniums at page 97, of No. 280, and page 307, of No. 291, and for the propagation of *Calceolarias* see No. 289, page 271. The small purple plant is *Aubrieta deltoidea*, and the *Tropæolum* one of the many varieties that are raised from seed.

STRAWBERRY FORCING (A Young Beginner).—You may take up and pot all the plants of Black Prince and British Queen, but the others named by you we do not consider good kinds for forcing, and the British Queen is not a good early forcer; but you may pot Princess Alice Mand freely. Due de Malakoff forces well. Black Prince is very good for the purpose. The potting should be done forthwith, the plants being abundantly watered and shaded from bright sun until established. If the pots be placed in the house in February the fruit will be ripe in April, and the plants may be cleared out at the end of the month. We would advise you to pot last year's runners in preference to old plants, and when you can obtain well-rooted runners of the current year, by all means pot them, taking them up with a ball.

PEGGING DOWN CHINA ROSES (R. E. L.).—All the shoots of the China Roses may be pegged down, and doing so will not destroy them, unless the work is so carelessly performed as to break them. It should be done gently and by degrees.

AIR-ROOTS ON VINE STEMS (Idem).—Bad management has nothing to do with air-roots on the stems of Vines; they are the result of the roots being in a cold outside border, whilst the branches are in a warm, moist atmosphere. They are more or less present on all Vines when they become aged, and are evidence that the roots are not in a congenial medium.

COCKSCOMB DAMPING (W. C.).—The Cockscob sent appears to have suffered from an excess of moisture. We think a little more heat and more air would make all right, and we should certainly remove the plants to a cold frame, which you may easily convert into a stove by giving air early in the morning and shutting up early in the afternoon. We make no charge for answering questions.

PROPAGATING ACHILLEA CLAVENNE AND AUBRIETIA GRÆCA VARIEGATA (Subscriber).—The *Achillea clavennæ* is a pretty silver-edged plant, and in dry soils nearly as hardy as the Arabis. To make sure we would take up the plant and divide it into as many pieces as possible, and plant under a hand-light—if in small pots all the better, and give just a little protection in cold weather in winter. You will best propagate the variegated *Aubrieta græca* in a similar way; but cuttings of that, the smallest bits, will strike, and now is a good time. The common variegated Arabis we propagate by taking the cuttings in autumn and winter and inserting them in an open border with sand along the rows, and put in a few evergreen twigs in severe weather. *Viola corata* is easily propagated by cuttings, or taking up a plant and dividing it. *Viola lutea* is of even a closer habit—a bright yellow flower, one of the pretty plants Mr. Tyerman, of the Liverpool Botanic Gardens, has made popular, but which we have lost through the depredations of rabbits. It is an abundant bloomer.

NAMES OF PLANTS (Reigate).—*Clematis viticella odorata* (Mrs. M.).—*Rhododendron Edgworthii*; *Myoporum tenuifolium* (shrubby). Cuttings of either may be raised, but not without the attention of an experienced gardener. (A Constant Subscriber).—1, *Eranthemum* sp.; 2, *Colutea arborescens purpurea*; 3, *Oncidium flexuosum*; 4, *Asplenium furcatum*; 5, *Erica tetralix*. (J. P. B.).—All in a bad state. 5, *Eranthemum leuconeurum*; 6, *Scelopendrium vulgare crispum*. (Rebecca).—Nos. 1 and 3, *Begonia xanthina*, vars.; 2, B. Griffithii; 4, B. xanthina marmorea; 5, B. nitida; 6, B. parvifolia; 7, *Asplenium* (no fructification); 8, *Nephrolepis exaltata*; 9, *Pellaea hastata*. (T. B.).—1, *Struthiopteris germanica*; 2, *Lastrea Gouldiana*; 3 and 4, *Aspidum intermedium*. (Three-years Subscriber).—We cannot undertake to name such parcels of plants as you have sent; be moderate in your demands.—18, *Stachys lanata*; 24, *Lonicera japonica reticulata*; 29, *Santolina chamaecyparissus*; 10, *Symphoricarpos racemosus*; 11, *Tamarix gallica*; 2, *Buddha globosa*; 15, *Staphylea pinnata*; 21, *Cistus ladaniferus*; 6, *Ailanthus glandulosus*; 4, *Aucuba sempervirens*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending August 13th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 7	29.762	29.748	70	53	60	59	W.	.28	Fine; heavy clouds and showers; fine.
Thurs. 8	29.687	29.670	74	56	60	59	W.	.03	Densely overcast; cloudy with showers; fine.
Fri. . . 9	29.792	29.718	70	43	62	59	W.	.00	Fine; very fine throughout.
Sat. . . 10	30.180	29.916	70	45	64	60	W.	.00	Clear and exceedingly fine; very fine at night.
Sun. . . 11	30.006	29.885	79	53	64	59	S.W.	.00	Very fine throughout.
Mon. . . 12	30.069	29.958	84	59	64	59	S.	.00	Very fine, clear, and hot throughout.
Tues. . 13	29.959	29.922	88	51	65	60	S.E.	.03	Very fine; cloudless and hot; fine at night.
Mean	29.908	29.846	76.14	50.57	61.28	59.28	..	0.31	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

HOUDANS AT EXHIBITIONS.

In your last issue I noticed that the Manchester and Liverpool Agricultural Society, at a committee meeting recently held, have decided to offer special prizes for Spangled Hamburgs at their forthcoming Exhibition, and I am glad to perceive that justice has been meted, tardy though it be, to the numerous admirers of this pretty and useful variety; but I do complain of the slight which has been cast upon the French breeds, which are now deservedly coming into almost universal favour. Surely national antipathies have not prejudiced the Committee against these fowls. I do not wish to say one word against the merits of any other distinct varieties, but I insist that the French breeds—more especially the Houdan, of which I can particularly speak—possess valuable qualities unsurpassed by any other breed, and which deserve recognition at our poultry shows, which were ostensibly established for the purpose of encouraging the cultivation of useful and fancy varieties.

As egg-producers, Houdans are, I have no hesitation in affirming, unrivalled; my hens, hatched in 1866, although shedding their feathers, laying at the present time, as well as in early spring, and I have a pullet hatched in the middle of March, which presented me with her first egg on Sunday, the 4th inst. Houdans arrive at maturity at an early age, are extremely hardy, will prosper in a limited space, and their deep, full breasts render them especial favourites with the cock. I trust, then, that you will raise your voice in behalf of the French breeds, and endeavour to secure distinct classes for them at the Birmingham and other winter and autumn shows.

Can any one tell me whether it is indispensable that Houdans should have a muffling or heard? I had always understood that it was so, but at the show of the North Lincolnshire Agricultural Society held at Barton last week, an extra prize was awarded to a pen of Houdans, neither of the hens in which possessed this, as I think, necessary appendage. The birds, too, lacked size, though their plumage was all that could be desired. I take it that size should be the principal recommendation, then crest, muffling, and plumage.—LINDUM.

POULTRY PRODUCE.

The following is the result I have obtained from thirteen hens—viz.:—1 Cochin, 1 Brahma, 2 Game, 3 Dorkings, 1 Hamburg, 1 Crève Cœur, and 4 Cross-bred. I have two cocks, two pens, and a grass plot, upon which each cock alternately parades every fine day, but I generally keep them in the slated roosting-house when it is very wet.

The following statement, I think, will bear comparison with that of "COCKEREL," and I fancy if he can inform me the total weight, I may probably exceed his, as I have only one Hamburg (a breed that lays a great number of very small eggs), and he has three—

	Eggs.		Eggs.
January.....	32	May.....	193
February.....	57	June.....	163
March.....	127		
April.....	181	Total.....	753

If thirteen hens lay 753, twenty-two hens should in the same proportion lay 1274, and "COCKEREL's" have only laid 1008, 266 less.

I am sorry to say that my financial statement will not bear comparison with his, as I consider that I have been a loser of £1 19s. in the six months. I fear I am not taking "my eggs to the best market." My cock requires all I can find, and is very particular in ascertaining the market price. How am I kept out of the Gazette?—AN AMATEUR BREEDER.

BADMINTON SHOW.

THERE is always something to be learnt by a journey, and therefore always pleasure in journeying, whether it be a long journey or a short one. Take the former case. You enter a nearly-full railway carriage, and are accordingly looked at as an intruder; but in a few minutes you are forgiven and received into the brotherhood, especially if at the next station you manage to keep out another intruder. If it be morning you may notice how each man is engrossed in his newspaper, reading, steadily reading, every column, not skimming the page as at home. Then, each having finished his own paper, there comes the

mutual exchange, every one hoping that every other one's paper may contain an additional scrap of news; but at length all the papers are exhausted, and the readers look doleful enough. Some try to sleep, but do not succeed, and then the hours drag slowly on. If one traveller eats his sandwich the others eye him for amusement, and consequently he eats in restraint and awkwardly. Hours go on. If one unlocks his portmanteau and struggles energetically to force in his newspaper, this simple act is regarded by his fellow travellers with great attention and interest.

Then there are the people one meets with when travelling. Recently I sat opposite an Italian gentleman, and he amused me infinitely. He related that when he first came to England he met a man who said in passing, "A fine day!" and said he, "I looked up and around, and could not see it was a fine day." He said this with a shrug and turning up of the eyes which was delicious. "Then," said he, "I met a second man who said, 'A fine day!' but after a while I learned that such days were fine by comparison. But oh for the blue skies of Italy!" To continue, speaking of journeys, there were one's boyhood journeys—getting up and driving off in the paternal vehicle while it was yet a summer's night, and the chilliness before dawn; and how as we advanced—

"Up leaped on a sudden the sun,
And against him the cattle stood black every one,
To stare through the mist at us quick driving past."

Well, yesterday I drove as of yore, but not in early morning, for poultry shows are as a rule not open before noon; and I drove along the same road on which William III. went on his visit to the Duke of Beaufort of his day—the road the same, and the villages much the same. I noticed as I left Wilts and entered the high table land of Gloucestershire near to Badminton, how the marks of large ownership became visible in fine timber and exquisitely neat hedges. Badminton village entered, what model cottages I beheld, with such model gardens; and then the village street was more like a park carriage-drive than a street. If in a coming democratic age the law of primogeniture should cease, and with it large properties cease, England will be reduced to what Robert Hall said Cambridgeshire is, "a mere rich mead-land," with no hedges, no trees, nothing to overshadow one blade of corn; for a poor owner, which a small owner would be, could not afford to let the fine trees remain. Hence the beauty of the country would in a great degree be at an end.

So musing, I enter the portion of Badminton Park appropriated to the Show. Entrance money paid and catalogue bought, I prepare to investigate all before me. Clearly the feature of the Show is the horse department, and particularly the horses sent as "extra stock" by the Duke. I glance at the flowers, vegetables, and fruits. Some were cottagers' prizes, others amateurs' prizes, and (I liked this), prizes for school children "for the best nosegays of wild flowers." Then prizes for the best collection of flowers in pots suitable for a cottage window; then various other local prizes. Amid the Roses I see in a very fair stand one marked "Gloire de St. John!" The owner did not gain a prize, but orthography and success went together. A lady near me as I write says that poor "Gloire de Dijon" is often called in her county "Gloire be to thee, John!"

Proceeding through the Show, looking at the horses, sheep, and cattle, and not looking at the pigs, I reach a corner where is a barricade, and a man with a money-or-your-life air demands 6d. before entering the poultry tent—this, mark you, in addition to the shilling already paid for admittance into the Show; and, further, this fearful man demanded 3d. more for each re-entrance. Now, this was a great mistake, and must be altered. Englishman-like I grumbled and paid, but on re-entering twice afterwards I was not (thanks to the courtesy of a clerical steward), retaxed by the terrible money-demon.

There were 104 pens of poultry and 36 pens of Pigeons. This was the first show, and I hope that next year will be larger. The Brahma class was the best, and then the *Spanish*. I was sorry not to see any of Mr. Uinton's or Miss Millward's birds; Mr. Heath's fowls and Pigeons, though entered, did not arrive, and there was no Bristol bird at Badminton. All this was very unfortunate; and the result was, the poultry was not too good, and the Pigeons less valuable than the poultry. Mr. Hanks, of Malmesbury, and Mr. Maggs, of Tetbury, had it therefore all their own way. Rev. R. H. Mullens showed a good pen of *Hamburgs*, and Rev. A. K. Cornwall a good pen of *Game Bantams*, though the cock was not in its full beauty owing to moulting, its hackle conspicuous by its absence. The *Game* fowls were numerous but inferior—like the roughs of London, a very undeserving class. *Ducks* were abundant, and could almost quack down the fowls, so numerous were they. The pens were sadly small, but are to be altered next year. Those prepared for the *Pigeons* were narrow dark dens, not pens. The Carriers seemed to me to be *Dragons*, and the *Dragons* might better have been called Carriers. Next year I hope in the larger pens to see much better birds: still this Show, remember, is but the first, and we walk before we run. At the refreshment stall I could only obtain confectionery. May I next year hope to find beef and ham, or a good bit of Wiltshire cheese?

Leaving the Show I enter, armed with a "garden ticket," his Grace's private grounds, kindly made public for the day. Not so much of beauty as of vastness of extent characterises all at Badminton. We do not stop and say "How exquisite!" but rather "What a noble domain!" The kitchen gardens look like walled fields, the pleasure grounds are those of a palace. On and on I walk, hearing not far

from me the deep bay of the hounds—those far-famed hounds unrivalled in England. Gradually I came in front of the house, and with eyes raised to a sharp angle examine that lofty building. How high and lengthy it is! Its size rather than its architecture appeals to one's admiration. In front is the level expanse called "The Lawn," where take place annually "The Lawn Meets;" an engraving of a well-known picture of one of these is in most houses in North Wilts and West Gloucestershire. This lawn is very large, making the avenue beyond almost too distant for a good effect. Fine timber meets one's eye everywhere.

Retracing my steps I reach the flower gardens. Here a sunk garden gay with bedding plants; there walks running on among shrubs—like everything at Badminton, very large. In the corner of a conservatory I find an aviary, probably the delight of the little ones of her Grace. A turn brings me in sight of the church, and there immediately at the back of the house I find another flower garden. Proceeding further, I leave the grounds, but chancing to turn back I catch a sight of the whole group of buildings forming Badminton House, and they look like a small town. Specially interesting to dwellers in North Wilts and Gloucestershire is Badminton, being the residence of the very popular Duke of Beaufort, whose kind bearing and manly character endear him to all, while her Grace is always spoken of with the utmost respect, and, better still, the greatest regard. Leaving the park I am again in the village, gay with flags and bright with holiday faces. But alas! rain long threatened and coming in dribbles, is now coming in earnest in great sheets of wet, and I drive home through a blinding rain, Pluvius having fairly conquered Sol.—WILTSHIRE RECTOR.

THE following is the prize list of the Poultry and Pigeon department, in which Mr. G. S. Sainsbury officiated as Judge:—

DORKINGS (Any variety).—First and Second, G. Hanks, Malmesbury. Commended, Rev. A. K. Cornwall, Beccome, Uley. **CHICKENS**.—First, Rev. A. K. Cornwall.

GAME (Any variety).—First and Second, G. Hanks. **CHICKENS**.—Prize, G. Hanks. Highly Commended, J. Goulter, Acton Turville.

BRAHMAS.—First, J. S. Maggs, Tetbury. Second, Miss P. M. Long, Wotton-under-Edge. **CHICKENS**.—Prize, J. S. Maggs. Highly Commended, Rev. R. H. Mullens, Acton Turville.

COCHINS (Any variety).—First, F. G. Phillips, Chippenham. Second, A. Heath, Calne. **CHICKENS**.—Prize, J. S. Maggs.

SPANISH (Any variety).—First, G. Hes, Stoke Gifford. Second, — Brown, Badminton. Commended, T. H. Craddock, Hawkesbury, Upton.

HAMBURGS (Any variety).—First, Rev. R. H. Mullens. Second, Rev. G. F. Le Mesurier, Tormarton. Commended, A. E. Ricketts, Didmorton. **CHICKENS**.—Prize, W. S. Shaw, Bath. Highly Commended, R. H. Mullens.

BANTAMS (Any variety).—First, Rev. A. K. Cornwall. Second, Lady G. Codrington, Dodington.

DUCKS (Aylesbury).—First, Duke of Beaufort. Second, G. Hanks. Commended, G. Hanks. **DUCKINGS**.—Prize, G. Hanks. Highly Commended, Mrs. Hartley, Lye Grove. Commended, Mrs. Thompson, Badminton.

EXTRA STOCK.—Prize, Rev. G. F. Le Mesurier.

DUCKS (Rouen).—First, Rev. R. H. Mullens. Second, G. Hanks. **DUCKINGS**.—Prize, Mrs. Thompson. Highly Commended, G. Hanks.

TURKEYS (Any variety).—Prize, Mrs. C. Blatwayt, Wyham.

GEES.—First and Second, G. Hanks. Commended, Mrs. Hartley.

PIGEONS.

CARRIERS.—First, Rev. C. M. Perkins, Badminton. Second, Lady G. Codrington.

DRAGONS.—First and Second, — Jones, Malmesbury.

POUTERS.—First, — Jones. Second, Rev. C. M. Perkins.

FANTAILS.—First, Rev. G. F. Le Mesurier. Second, Rev. C. M. Perkins.

TURBITS.—Prize, Rev. C. M. Perkins.

TUMBLERS (Short-faced).—First, — Jones. Second and Commended, Rev. C. M. Perkins.

TUMBLERS (Baldheads).—First, — Jones. Second, R. Ricketts, Didmorton. Commended, Miss P. M. Long; Rev. A. K. Cornwall.

BARNS.—First, Rev. G. F. Le Mesurier. Second, Rev. C. M. Perkins.

YORKSHIRE AGRICULTURAL SOCIETY'S POULTRY SHOW.

THE quiet, little, old-fashioned market town of Thirsk has been the scene, during the past week, of great bustle and gaiety. The Yorkshire Agricultural Society held its annual Show there on the 7th, 8th, and 9th, on the racecourse, a place admirably adapted for the purpose. The quantity of "banting" displayed in honour of the occasion was something wonderful. From windows, from the roofs of houses, the tops of trees, the tower of the fine old church (an edifice, by the way, which the visitor to Thirsk should on no account neglect to see), waved flags of vivid colours. The weather was fine and sunny, and "swarms of folks," as a beholder expressed it, both vehicular and pedestrian, thronged the road leading from the railway station to the Show-ground. Upwards of 20,000 persons were present. The show of poultry was not unworthy of the great Yorkshire Society, and comprised many excellent birds.

On entering the grounds the ear was at once saluted by the song of Chantrelers, and advancing towards the poultry department, a small wooden booth presented itself to notice, covered with announcements, in large type, that chickens were here "hatched by steam," &c. Two or three dapper young men, in the doorway, were holding forth on the extraordinary advantages of the wonderful invention which was exhibited within. After descending on the theme for some time, one of the speakers darted into the booth, and instantly emerged with a chicken in

his hand, which he declared to be "just out;" then rushing in again, he soon re-appeared with a chirped egg. "Listen, and you will hear a feeble chirp. Now, this here bird is just a-comeing out. Walk in, ladies and gentlemen, and see the whole process. Only two-pence." The eloquence was irresistible, and great was the shower of coppers which fell into the hands of those clever demonstrators of science.

The programme commenced with *Spanish*, and there was a very good show of these favourite birds. The first and second prize pens were of nearly equal merit. If it would not be hypercritical to hint a fault in Mr. Beldon's magnificent Spanish cock, we would ask if he is not just a little too much squirrel-tailed? Mr. Thresh's cock bird seemed somewhat out of condition. *Dorkings* were very good, but some of them were far advanced in the moult, and others were marred by crooked breasts. The *Cochin* class was extremely good. A cockerel, five months old, of great promise, was exhibited by Mr. Brown, Mr. Beldon "marked him for his own;" and we venture to predict that this young bird will win many prizes in succeeding years. *Brahmas* were also very good, particularly the cock birds; Sir William Payne Gallwey's prize cockerel towering aloft in his pen, a prodigiously tall bird. When fully grown and filled up he will be a very Chang among *Brahmas*. There was not so large an entry for *Game* as might have been expected; the prize birds, however, were of great excellence, indeed it would be difficult to find a more perfect pen than that shown by Mr. Aylroyd. Mr. Julian's birds were also very good. In *Hamburghs* there were some capital pens, particularly the Silver-spangled and Silver-pencilled belonging to Mr. Beldon and to Mr. Pickles. In *French Fowls* the first prize was won by a splendid pen of White-crested Polands, the second prize was won by Houdans, and the third by Guinea Fowls. *Bantams* were in great variety, and some of them of very good quality.

Geese were scarcely up to the average; but the *Turkeys* were very superior. Mr. Braithwaite's prize pen was claimed by Mr. Leech, and also by another gentleman. *Ducks* were very good, notably a pen of *Rouens* shown by Mr. Leech, which were of the highest quality. In the Any other variety of *Ducks*, the Rev. J. G. Milner carried off two prizes with *East Indians*.

In *Pigeons* the entries were not numerous, but the birds were generally of great merit. Mr. Jesse Thompson exhibited some beautiful birds, and succeeded in winning seven prizes.

The arrangements connected with the Show were excellent, and the birds were carefully tended; but despite "the best-laid schemes of mice and men," casualties will occur. On Thursday we observed a Golden-pencilled hen, a prize bird belonging to Mr. Pickles, lying dead in the pen. The awards are as follows:—

SPANISH.—First, H. Beldon, Gaitstock, Bingley. Second, J. Thresh, Bradford. Third, W. H. Orner, Newsham Bar, Thirsk.

DORKINGS.—First, H. Beldon. Second, J. White, Warlaby, Northallerton.

Third, Mrs. Dale, Scarborough.

COCHINS.—First, H. Beldon. Second, G. Calvert, Darlington. Third C. Pense, Southend, Darlington.

BRAHMA POOTRA.—First, E. Leech, Rochdale. Second, H. Beldon.

Third, Sir W. Payne Gallwey, Bart., M.P., Thirsk.

GAME (Black-breasted and other Red).—First, E. Aylroyd, Bradford.

Second, H. M. Julian, Hull. Third, J. Watson, Knaresborough.

GAME (Any other variety).—First, H. M. Julian. Second, J. Rennison, Skiff, Holme-on-Spalding Moor, York. Third, J. Watson.

HAMBURGS (Golden-spangled).—First, H. Beldon. Second, J. Walker, Knaresborough. Third, T. Walker, jun., Denton, near Manchester.

HAMBURGS (Silver-spangled).—First, H. Beldon. Second, H. Pickles, jun., Earby, Skipton. Third, J. Slater, Hushwaite, Easingwold.

HAMBURGS (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, jun. Third, W. Bearpark, Ainderby Steeple, Northallerton.

HAMBURGS (Golden-pencilled).—First, H. Beldon. Second, H. Pickles, jun. Third, W. Bearpark.

FRENCH FOWLS (or any other distinct variety).—First, H. Beldon, Second, Rev. G. Hustler, Stillinglee Vicarage. Third, R. Wright, Maunby.

GAME BANTAMS.—First, W. F. Entwistle, Leeds. Second, F. Powell, Knaresborough. Third, H. Pennington, Thirsk.

BANTAMS (Any other distinct variety).—First, Mrs. Dale. Second, Messrs. S. & R. Ashton, Mottram, Cheshire. Third, Mrs. E. Ledgard, Poppleton, York.

SINGLE COCKS.

SPANISH.—Prize, J. Thresh.

DORKINGS.—Prize, T. Blackburn, jun., Ingleby Greenhow.

COCHIN-CHINA.—Prize, R. E. Brown, Wass, Coxwold.

GAME.—Prize, W. Bearpark.

BRAHMA POOTRA.—Prize, Sir W. Payne Gallwey, Bart., M.P.

GEES.—First, Rev. G. Hustler. Second, O. A. Young, Driffield, Yorkshire. — Gostings. — First, E. Leech. Second, Rev. G. Hustler.

TURKEYS.—First, S. B. Braithwaite, North Otterington. Second, H. Merkin, Driffield.

DUCKINGS (Aylesbury).—First, E. Leech. Second, H. Beldon. Third, T. Pinkney, Crown Inn, Thirsk.

DUCKINGS (Rouen).—First, E. Leech. Second, H. Beldon. Third, W. Bearpark.

DUCKS (Any other variety).—First and Third, Rev. J. G. Milner, Bellerby, Leyburn. Second, H. B. Peirse, and Miss Peirse, Badale (Black Indian).

PIGEONS.

CARRIERS.—Prize, J. R. Treman, Helmsley.

TUMBLERS (Almond).—Prize, Messrs. Hattersley & Wilson, Thirsk.

TUMBLERS (Balds, Beards, and Mottled).—Prize, J. Fisher, Sowerby, Thirsk.

OWLS.—Prize, Messrs. Hattersley & Wilson.

NUNS.—Prize J. Thompson, Bingley.

TURBITS.—Prize, J. Thompson.

JACOUBINS.—Prize, J. Thompson.

FANTAILS.—Prize, J. Thompson.

TRUMPETERS.—Prize, J. Mason, Boroehridge.
POUTERS OR CROPPERS.—Prize, J. Thompson.
BARBAS.—Prize, J. Thompson.
DRAGONS.—Prize, J. Thompson.
ANY OTHER VARIETY.—Prize, J. Mason.

The Judge was Mr. John Douglas, Clumber, near Worksoy; and Mr. James Dixon, North Park, Clayton, Bradford.

WORSLEY POULTRY SHOW.

THE third Show of the Worsley and Swinton Association was held on the 7th inst., in the beautiful park of the Earl of Ellesmere, at Worsley, near Manchester, and proved in every way a success. The weather was all that could be desired, consequently the attendance of visitors was very great. The following prizes were awarded:—

DORKINGS.—First, C. W. Brierley, Middleton. Second, S. Farrington, Chat Moss, Astley.
SPANISH.—First and Second, N. Cook, Chowbent.
POLANDS (Any variety).—First, C. W. Brierley. Second, S. Farrington.
COCHIN-CHINA (Any variety).—First, W. A. Taylor, Manchester. Second, C. W. Brierley.
GAME COCK.—First, C. W. Brierley. Second, J. Roycroft, Salford.
GAME (Black-breasted Red).—Prize, C. W. Brierley.
GAME (Any other variety).—Prize, C. W. Brierley.
HAMBURGERS (Golden-pencilled).—First and Second, W. Parr, Patricroft.
 Highly Commended, W. Parr; T. Wrigley, jun., Tonge, Middleton.
HAMBURGERS (Silver-pencilled).—First, W. Parr. Second, J. Platt, Dean, near Bolton.
HAMBURGERS (Golden-spangled).—First, T. Wrigley, jun. Second, W. Parr. Commended, W. Parr.
HAMBURGERS (Silver-spangled).—First, T. Wrigley, jun. Second, W. A. Taylor. Highly Commended, W. Parr.
BANTAMS (Any variety).—First, W. A. Taylor. Second, S. Farrington.
ANY OTHER VARIETY.—Prize, N. Cook (Crève Cœur).
GEES.—First, J. S. Culcheth. Second, H. Neild, Worsley. *Goslings.*
 —First, P. Nightingale, Worsley. Second, J. H. Masfen & W. E. Broadhurst, Worsley.
DUCKS (Aylesbury).—First, E. Leech. Second, W. Parr.
DUCKS (Rouen).—First, E. Leech. Second, H. Neild.
DUCKS (Any other variety).—First, C. W. Brierley. Second, W. Parr (Black Ducks).
TURKEYS.—First, W. S. Holden, Farnworth. Second, E. Leech.

The Judges were Captain Heaton, Manchester, and Mr. S. Fielding Trentham Hall.

HASTINGS AND ST. LEONARDS POULTRY SHOW.

THE second Exhibition of Poultry, Pigeons, Rabbits, &c., was held on the 7th and 8th inst., in the Central Cricket Ground, Hastings. Unfortunately the opening day like that of last year was anything but favorable for the event, rain falling heavily at short intervals during the day. This had the effect of causing the number of visitors to be very limited. Thursday being more propitious, a goodly number assembled, but still, financially speaking, the receipts would fall very short of the expenses incurred, which is a matter of regret, as the Committee had evidently spared neither pains nor outlay to make the arrangements complete.

The eight silver cups and £100 in money prizes, brought together 267 pens. The *Dorking* class was exceedingly good, the silver cup being awarded to Lady Holmesdale for a magnificent pen of old birds. *Game*, *Spanish*, and *Cochins* were exceedingly well represented. The *Light Brahmas* drew forth especial attention and admiration, every pen being noticed by the Judge. The prize birds in the following classes:—French fowls, Gold and Silver-pencilled *Hamburgs*, and *Game Bantams* well deserved their honours, also the *Pigeons*, amongst which there were some very beautiful specimens. The 1867 chickens were more forward than could have been expected, and appeared to be in every case honestly shown. As far as the quality of the birds and the number of pens exhibited were concerned, the Show may be pronounced a complete success.

The following is the list of awards:—

DORKINGS (Any colour).—Cup, Viscountess Holmesdale, Linton Park, Staplehurst, Kent. Second, H. Lingwood, Needham Market, Suffolk. Third, Viscountess Holmesdale. Commended, T. P. Edwards, Lyndhurst, Hants; F. Parlett, Chelmsford; S. Onley, Whitecombe, Brentwood Essex; L. Putton, Concygrave House, near Tannock, Somerset. *Chickens.*—D. C. Campbell, H. D., County Asylum, Brentwood, Essex. Second, F. W. Pitcock, Silling, Hyde, Kent. Highly Commended, J. Lewry, Cuckfield, Essex; Viscountess Holmesdale; Rev. J. M. Rice, Bramber Rectory, Steyning. Commended, Mrs. M. Seamons, Hartwell, Aylesbury, Bucks.
SPANISH (Black).—First, J. R. Rodbard, Aldwick Court, Winton, Bristol. Second, Viscountess Holmesdale. Third, J. Jenner, Lewes. *Chickens.*—First and Second, F. James, Peckham. Highly Commended, F. James; J. Jenner.
COCHINS (Cinnamon and Buff).—First, R. White, Sheffield. Second, H. Lingwood. Third, Mrs. A. Christie, Lewes. *Chickens.*—First, Rev. C. D'Aeth, Knowlton Court, Wingham. Second, F. W. Rust, Hastings.
COCHINS (Any other variety).—First, J. R. Rodbard. Second, S. Onley. *Chickens.*—First, J. R. Rodbard. Second, H. Lingwood, Suffolk.
BRAMMAS (Dark).—Cup, F. James. Second, M. Bayley, Sussex. Third, H. Dowsett, Pleshey, near Chelmsford. *Chickens.*—First, F. James. Second, H. Dowsett.
BRAMMAS (Light).—First, F. Crook, Forest Hill, Kent. Second, H. M. Maynard, Holmewood, Ryde. Highly Commended, H. Dowsett; F. Crook.

Commended, R. Ede, Worthing, Sussex; J. Arnold, St. Leonards-on-Sea; J. Parca, Postford, Guildford.

BRAMMAS (Any other breed).—*Chickens.*—First and Second, H. Dowsett. Extra Second, H. M. Maynard. Highly Commended, F. Crook. Commended, R. Ede; C. W. Mason, Brighton.

GAME (Black-breasted and other Red).—First, S. Matthew, Stowmarket. Second, R. Pashley, Worksoy, Notts. Third, J. Jeken, Eltham, Kent. *Chickens.*—First and Second, J. Jeken.

GAME (Any other variety).—Prize, S. Matthew. *Chickens.*—Prize, R. Pashley.

HAMBURGERS (Gold and Silver-spangled).—First and Second, H. Pickles, jun., Earby, Skipton. *Chickens.*—First and Second, H. Pickles, jun. Highly Commended, T. Penfold, Sussex.

HAMBURGERS (Gold and Silver-pencilled).—First, C. Havers, Essex. Second, H. Pickles, jun. Commended, F. Pittis, jun., Newport, Isle of Wight. *Chickens.*—First and Second, H. Pickles, jun.

POLISH (Any variety).—First, T. P. Edwards, Lyndhurst, Kent. Second, D. Mutton, Brighton.

POLISH (Any other distinct variety).—First and Second, Col. Stuart Worthy, Grove End Road, London. Third, National Poultry Company, Bromley, Kent. Highly Commended, H. M. Maynard; T. Penfold, Sussex; National Poultry Company. Commended, S. A. Wyllie, Surrey.

GAME BANTAMS (Any colour).—Cup, W. F. Entwistle, Leeds. Second, F. Parlett. Highly Commended, E. Sheerman, Chelmsford. Commended, Viscountess Holmesdale.

SINGLE COCKS.

GAME COCK (Any colour).—First, J. Jekin. Second, R. Pashley. Highly Commended, H. C. Musters, Derbyshire. Commended, F. Kipping, Kent. *Cochins* (Cinnamon and Buff).—First, F. W. Rust. Second, Rev. S. C. Hammerton, Warwick.

DORKINGS (Any variety).—First, Viscountess Holmesdale. Second, J. Lewry. Highly Commended, M. Bayley. Commended, R. Deudney, St. Leonards-on-Sea.

DUCKS (White Aylesbury).—First and Second, Mrs. M. Seamons. Highly Commended, Mrs. Brassey, Sussex.

DUCKS (Any other variety).—First, J. Oliver, Sussex. Second, S. A. Wyllie. Highly Commended, W. Balls, Hastings. Commended, J. T. Stace, Ore, near Hastings; J. Oliver.

GEES.—First, Mrs. M. Seamons. Second, Lady M. Macdonald, Hants.

PIGEONS.

POUTERS.—First, R. Fulton, Deptford. Second, H. Yardley, Birmingham. Highly Commended, R. Fulton.

CARRIERS (Black).—First, R. Fulton. Second, H. M. Maynard. *CARRIERS (Any other colour).*—First, R. Fulton. Second, H. Yardley.

TUMBLERS (Almond).—First and Second, R. Fulton. *TUMBLERS (Any other variety).*—First, R. Fulton. Second, H. Yardley.

FANTAILS.—First, S. A. Wyllie. Second, H. Yardley. Highly Commended, H. M. Maynard.

ANY OTHER VARIETY.—First, R. Fulton. Second, H. M. Maynard. Highly Commended, H. Yardley; R. Fulton; S. A. Wyllie; National Poultry Company. Commended, H. Carwood, Thorne, near Doncaster.

CANARIES NORWICH (Yellow or Buff).—Second, J. Lamb, Hastings.

BRITISH BIRDS.—Blackbirds.—Second, G. Barnes. *Any other variety.*—Second, J. Lamb.

RABBITS (Lops, Longest-eared).—*Buck (Any colour).*—First, S. Taylor, Hastings. Second, T. Elphick, St. Leonards-on-Sea. Third, J. White, Hastings. Highly Commended, J. Selden, St. Leonards-on-Sea; H. M. Maynard; H. Yardley. *Doe (Lops, Longest-eared).*—First, O. Nicholson, Landport. Second and Highly Commended, H. M. Maynard. *Buck (Any other variety).*—First, W. Hornton, St. Leonards-on-Sea. Second, R. R. Wise, jun., Hants. Highly Commended, H. Carwood.

JUDGES.—For *Poultry and Pigeons*, W. Tegetmeier, Esq., Muswell Hill, London. For *Rabbits and Canaries*, Mr. John Price, of St. Leonards; assisted by Mr. G. Dowsett, Hastings.

ORMSKIRK AND SOUTHPORT POULTRY SHOW.

THIS was held at Ormskirk, on Wednesday, the 7th inst. The following is the list of awards:—

DORKINGS.—First, J. Robinson, Garstang. Second, Admiral Hornby, Knowley. *Chickens.*—First, W. A. Taylor, Manchester. Second, Admiral Hornby. Highly Commended, Lady Scarisbrick.

COCHIN-CHINA (Buff).—First, W. A. Taylor. Second and Highly Commended, T. Stretch, Ormskirk. *Chickens.*—First, A. Bamford, Middleton. Second, W. A. Taylor. Highly Commended, D. Gellately, Meigs, Perth.

PARTRIDGE OR GROUSE.—First, T. Stretch. Second, J. Stephens, Walsall, Stafford. Highly Commended, T. Stretch; C. W. Brierley, Middleton; A. Bamford. *Chickens.*—First, J. R. Rodbard, Winton, Somerset. Second, T. Stretch.

BRAMMA POOTIA.—First, H. Lacy, Hebden Bridge, York. Second, J. Holt, Hesketh, Southport. *Chickens.*—First, H. Lacy. Second, G. H. Wheeler, Middleton.

SPANISH.—First, R. Teebay, Fulwood. Second, H. Beldon, Bingley, Yorkshire. *Chickens.*—First, J. Stephens, Walsall, Stafford. Second, D. Gellately.

GAME.—First, J. Wood, Wigan. Second, C. W. Brierley. *Chickens.*—First, J. Wood. Second, J. Sumner, Upholland. Highly Commended, J. Sumner.

HAMBURGERS (Golden-spangled).—First, N. Marlor, Denton, near Manchester. Second, J. Roe, Hadfield, Derbyshire. Highly Commended, H. Beldon.

HAMBURGERS (Silver-spangled).—First, R. Teebay. Second, H. Beldon.

HAMBURGERS (Golden-pencilled).—First, J. Robinson. Second, H. Beldon. Highly Commended, S. Smith, Northowram, Halifax.

HAMBURGERS (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, jun., Earby, Skipton.

BANTAMS (Any variety).—First, E. Musgrove, Aughton. Second, J. W. Morris, Rochdale.

ANY OTHER DISTINCT VARIETY.—First, H. Beldon. Second, Col. Stuart Worthy, Grove End Road, London.

GAME COCK (Any variety).—First, C. W. Brierley. Second, Admiral Hornby. Highly Commended, C. W. Brierley.

GAME BANTAM COCK (Any variety).—First, G. R. Davies, Knutsford. Second, J. Holmes. Highly Commended, J. Bryers, Ormskirk; C. W. Brierley. DUCKS (Aylesbury).—First, E. Leech, Rochdale. Second, J. Robinson. DUCKS (Rouen).—First, Admiral Hornby. Second, E. Leech. Highly Commended, E. Musgrove; J. Wood.

GESE (Any variety).—First, Admiral Hornby. Second, J. Bryers, Ormskirk. Highly Commended, J. Fairhurst, Ormskirk; S. H. Stone, Rochdale; J. Bryers.

TURKEYS.—First, Admiral Hornby. Second, E. Leech. PIGEONS.—*Runts*.—Prize, Countess of Derby, Knowsley. *White Owls*.—Prize, Countess of Derby. *Isabels*.—Highly Commended, Countess of Derby. *Blue Carriers*.—Highly Commended, J. Birch, Sefton. *Dun Carriers*.—Prize, H. Yardley, Birmingham. *White Pouters*.—Highly Commended, H. Yardley. *Black Barbs*.—Prize, H. Yardley. Highly Commended, H. Yardley.

JUDGES.—Mr. Joseph Hindson, Everton; and Mr. Tate, Preston.

BANTAM AWARDS.

THE great poultry shows will soon be upon us, and I venture respectfully to call the attention of judges to one or two small matters. The first is the award of a silver cup for Bantams, any variety. It seems to be invariably the rule in a general competition to award the cup to Game, no matter how good and perfect the other competing pens may be. It would be only fair to breeders of other varieties to vary it occasionally, when a pen of any certain breed is exhibited with all points so perfect as to leave no room for improvement. I hope the prejudice in favour of Game will this season be overcome when first-class specimens of other breeds compete for a general cup.

Another matter is the trimming of rose-combed birds. Those that have their combs grown naturally and true should have the preference over those that have been manipulated so as to bring them to the proper shape and size. I have often seen a winning pen with the mark of the scissors and wire on the comb of the cock.—ROSE COMB.

RABBITS' EARS.

IN answer to the inquiries of "W. R." respecting long-eared Rabbits, and your request for information, I can assure him that it is impossible to lay down any rule as to the length at three months old and subsequent growth per week. I am fond of breeding long ears, and have found them not only to vary in different strains, but also in the same litter. Some grow rapidly for the first eight weeks, then more slowly; others the contrary.

I have now three young grey and white Rabbits twelve weeks old, two bucks and one doe. At eight weeks the doe's ears were nearly an inch shorter than the best of the others; now her ears are 19½ inches long, measured without pulling at all, beating her brothers by at least three-quarters of an inch. I have also two yellow and white Rabbits, a buck and a doe, eleven weeks old, whose ears were short up to nearly eight weeks old, when they shot out, and now they are long for their age, and growing fast, being 19½ inches in length. In this measurement I calculate upon 1½ to 2 inches, in some cases more, as being the actual show measurement, which would make them more than 21 inches long at eleven weeks, and this, as I remarked, after being short at the commencement.

With proper care and feeding, and with good stock (not manufactured long ears), I do not think it difficult to have Rabbits at from five to six months old with ears from 21 to 22 inches long, with occasionally a prize one with another inch or nearly; but never tamper with their ears, never pull them or rub them, it only irritates them, and makes their ears hard or harsh. A good ear is always soft and velvety, a manufactured one more like cotton goods.

If any of your contributors wish for any further information, I shall be happy to supply any that I can give.—C. FELTON, Gravelly Hill, near Birmingham.

A RABBIT at a month old ought to measure 13 inches; at six weeks old, 15 inches; and grow 1 inch per week until it is fourteen weeks old. I find but a very slow growth, if any, after Rabbits reach fourteen weeks old. I have at the present time some young Rabbits fourteen days old measuring 9 inches. The greatest perfection can be obtained only by nursing, breeding, and feeding.—W. WHORWELL, Snargate Street, Dover.

BRISTOL AND CLIFTON POULTRY SHOW.—This Show is to be held on November 6th, 7th, and 8th, and in addition to liberal

money prizes in fifty-six classes, no less than eleven silver cups are offered.

STRENGTHENING A WEAK STOCK OF BEES.

I AM an amateur bee-keeper. I bought two stocks last October—No. 1, a strong heavy hive, a May swarm, and that had been enlarged or "imped," or "eked," as it is termed in this neighbourhood (Garforth, near Leeds); No. 2, also a good stock, but of ordinary dimensions; both in common straw hives, and both of them with ample store for winter consumption. Early in January we had a few sunny days, and I observed unusual activity outside No. 1, and on looking closely afterwards I discovered a large quantity of dead bees on the ground. My neighbours told me my hive had been visited by robber bees. About the end of May No. 1 was again very busy, and I expected a swarm from it very shortly, while No. 2 appeared to have scarcely any bees at all. Then came cold wet weather, and then came also those thieving rascals above mentioned, or others; and No. 1 has gone on from bad to worse ever since, till at length, on looking in, I find a considerable quantity of the comb has disappeared from the lower parts of the hive, and, to judge from the weight, there can be very little honey indeed. On tapping the hive there appears to be a goodly number of bees, but very few show outside, and of these few the majority seem to consider it their sole business to air themselves on the floor-board; or if a plunderer comes with his provoking buzz they do indeed show a semblance of fight, but if he is determined they usually allow him to enter, and, I suppose, help himself.

No. 2, I may remark, is now a vigorous stock, with plenty of honey and abundance of bees.

Now, what should I do? Can I do anything but let matters take their own course? Had it not been so late in the season I might, I suppose, have united the two stocks in No. 1, and taken the honey out of the other, but this is out of the question now. Would you recommend me to feed my weakened stock and try and save it? I would gladly do so if it would be of any avail, for I really take a great pleasure in my favourites. If I am to feed, what food would you recommend?—A YORKSHIRE NOVICE.

[No. 1 might possibly be resuscitated if you were to drive and add to it the inhabitants of a stock of condemned bees, (two would be still better), in the manner described in page 59 of the last edition of "Bee-keeping for the Many." Sufficient food should then be administered to enable it to stand the winter.]

PROTECTING HIVES—LIMITING DRONE PRODUCTION.

WILL you allow me to bring under the notice of the numerous readers of the Journal interested in bees, an exceedingly simple, inexpensive, and efficacious mode of protecting hives which are not under a shed? I have no sympathy with those bee-keepers who, (unintentionally no doubt), make a harbour for moths and earwigs out of rushes or straw, and then place a milk-basin on the top to keep them cosy and dry; and, therefore, when I had occasion this summer to protect a swarm, for which there was no room in the shed, I set about devising something different from the rush-and-basin system. I knocked together a few rough boards in the shape of a house, making the boards overlap to insure dryness; but this had too much of the appearance of a dog-kennel to please me, though the bees might not have been so fastidious. I then procured two American cheese-boxes, one of them the exact circumference required, the other much larger. Had this been the same size as the other, it would have saved me the trouble of drawing it in; but this was soon done. It had then the appearance of a drum with the ends knocked out. Cutting a hole for the entrance I fitted this down in the live, and placed the other, bottom upwards, upon it. I then knocked the top out of the lid of the smaller box, and fitted the hoop over the part where the two boxes joined, and thus fixed the upper part to the lower, and the whole was finished.

I might have procured one box of the requisite circumference and depth, and in this case all that would have been required would have been to have cut an entrance and turn the box upside down upon the hive; but by using two boxes I secure sufficient depth to allow of a super upon the hive, and when I wish to examine the super I have just to lift off the upper half,

as it is not fastened to the lower, but merely rests upon it, being kept in position by the hoop.

Thus, at the cost of a few coppers—if, indeed, provision merchants would make any charge for the boxes—bee-keepers who, like myself, have to do as they can, and not as they would like, may secure for their hives a neat, simple, and thoroughly efficient protector. As I do not suppose bees are partial to the odour of cheese, it will be necessary to rub the interior with a bunch of thyme or other sweet-smelling herb. It would also be advantageous, perhaps I should say necessary, to fit over the entrance a piece of zinc or tin, in order to throw off the rain.

Is it advisable to assist the bees in killing the drones, or can they manage this best themselves?—JOHN O'GAUNT, *Lancaster*.

[You do not state how you rendered the top of your hive-cover weatherproof, which is a very important point.

We believe it to be advantageous to limit drone production by permitting the existence of only a small proportion of drone-comb, which can readily be done in frame hives, but when once drones are hatched we consider it of little importance whether the workers are left to expel them unaided, or are assisted in the operation by the bee-keeper.]

LOSS OF QUEENS—HONEY DISCOLOURED.

How easily queens are lost if nucleus boxes are placed too near together. I have indeed found it so this summer. Most of them hatched, but they were all eventually lost. In one nucleus a queen attained forty-two days old, never laid an egg, then disappeared. In another nucleus a queen lived three days, and was then lost, never to return. In a third a fine queen lived seven days, and I never saw her afterwards.

I send a small box containing a sample of honey. I removed a Woodbury super from one of my strongest stocks on the 10th inst., the only honey I have taken this year, which is darker than I ever saw honey before. Can you explain it? I shall be very glad to know the reason you can assign for its extraordinary colour. Do you think it can be clarified, or will it do for bee-feeding?—D. D.

[The honey is certainly of a most extraordinary colour—so dark as to appear almost black, whilst it greatly resembles treacle both in taste and smell. We should really fancy that the bees must have obtained access to some refuse treacle, very highly coloured by the emanations from the numerous chimneys of Sheffield. Clarifying will not improve it, and it really appears as though it could only be used for feeding bees.]

HIVING BEES ESTABLISHED IN A ROOF.

THERE has been a colony of bees established for some years in the roof of the dwelling-house here, and it is desired if possible to establish them in a hive. The best time of year to attempt this, and any information as to the best method of doing so, will be received with many thanks. I might state that the roof is covered with slate; under the slate, boards; and the bees are between the boards and the ceiling of the attics.—J. G., *Streatham Common*.

[The present time is as good as any. Access must be obtained to the combs, which, when the bees have been quieted by means of smoke, should be cut out and arranged in a frame hive. If the queen and some of the bees can then be swept into the hive on the top of the frames, the crown board should be put on and the whole left as close as possible to the old spot, in order to collect the remainder of the bees, until the evening, when it may be removed to a new position. If the queen cannot be at once secured, the bees should be allowed to cluster together and then be swept into the hive. In all these operations it is easy enough to obtain the combs; the difficulty is to secure the bees also.]

CONSEQUENCES OF SELLING FOUL BROOD.

In reply to some observations which have appeared in recent numbers of THE JOURNAL OF HORTICULTURE, we beg to say that having imported stocks of Italian bees in order to insure a supply of the true race without mixture of black bees, we have been much surprised that in some instances they are contaminated with foul brood.

We are at a loss to account for the origin of the disease, except it be that the heat consequent on confinement during a

long journey has had the effect of engendering an atmosphere prejudicial to the brood.

No one can regret more than ourselves that, after the expense and trouble we have incurred in the endeavour to secure pure Italian colonies, we should unintentionally have been instrumental in conveying diseased stocks to a single apiary.

We have discontinued the sale of these stocks, broken up all the combs, had a thorough cleansing of the hives and frames, and have another apiary in a new locality, with fresh hives and bees.

By the junction of Italian queens to healthy English stocks, and substituting these for all infected hives that have emanated from us, we hope to give satisfaction to our friends.—Geo. NEIGHBOUR & SONS.

[We are glad to find that Messrs. Neighbour frankly admit that they have been vending foul brood. It appears, moreover, that they have had recourse to palliative measures. Having regard, however, to the subtle and malignant character of the malady, as well as the very great difficulty and uncertainty of effecting its eradication by any known means, it may perhaps be doubted whether, after selling foul brood during three successive seasons, they would not have best consulted their own interests, to say nothing of those of their customers, by declining any longer to incur the risk of disseminating so terrible a disease.]

OUR LETTER BOX.

COOKED MEAT FOR FOWLS (J. S. E.).—We consider cold cooked meat very good food for a fowl. It is too stimulating except for change and where fowls have a good grass run they do not require any animal food.

HOUDANS SUFFERING FROM A COLD (G. N.).—Your fowls are suffering from what you say, and we do not anticipate any evil result from the attack. We should say of them as people often say of themselves, It is only a cold. The treatment is by stimulants. Nothing is better than bread soaked in strong beer. A pill of camphor the size of a garden pea is a capital and effectual medicine. It is also good when there is any disease among fowls to put camphor in the vessels that hold the water they use in common. You should not take the hen away from her chickens unless she ill-treats them; and at their age they would do better if she were kept under a rip, which should be put on a gravel walk or dry hard spot, close to vegetables which will afford food and covert. You will find bread and milk a good change for chickens, and an inexpensive food.

HEN AFFECTED WITH A SWELLING (J. E.).—We have several hens similarly afflicted to that you mention. They have been so for a long time, but it is only now perceptible because they are moulting, and the old worn-out plumage fails to cover it. You may, if it be such a swelling as we imagine, cause it to decrease by depriving her of water, except in small quantities three times per day. The Robin would not cause it.

BROWN RED GAME WITH WHITE WING FEATHERS (Weekly Subscriber).—The occurrence is a very common one in all dark-feathered breeds, and the white feathers are always in the flight. In Spanish it is almost the rule. The chicken feathers are white, but they invariably change to black when they assume adult plumage.

CREVE COEUR WITH TWO NAILS ON ONE CLAW (Young Exhibitor).—It is a peculiarity which we have not before noticed. It is not desirable; but if the bird is good in other respects we should not get rid of her. As toes and nails are not among the important points of a Crève Cœur hen, we doubt whether the judges would discover or notice the superfluity.

TRUMPETER PIGEONS AT DEWSBURY SHOW.—"Your reporter says the prize birds are directly descended from Mr. Mewburn's birds. This I beg to deny. I bred both pairs, two of them from a cock and hen I bought of Mr. Bailly, imported birds; the other two were from the above cock, and two hens which were in no way connected with Mr. Mewburn's birds. The excellence of the birds is evidently derived from the cock, the hens they were bred from being only of moderate quality.—JOHN LAWLEY, *Bingley, Yorkshire*."

CHANGING THE FLOOR-BOARDS OF HIVES (Carols).—The occasional purification of floor-boards is doubtless advantageous, but can scarcely be deemed absolutely necessary, since we have frequently met with stocks of several years' standing in perfect health, the floor-boards of which had never been cleaned from the commencement. Many bees die from natural causes at this season; but an exceptionally high rate of mortality would argue that something was wrong. Has the stock been attacked by robbers? and is it amply supplied with food? We cannot undertake the labour of answering correspondents by letter.

POULTRY MARKET.—August 14.

ALTHOUGH the Grouse season will have commenced when this is before our readers, yet the necessity for going to press prevents us from giving any account of their appearance, or of the early supply. Poultry will now get to its lowest price, and the demand for a time will be nearly nominal.

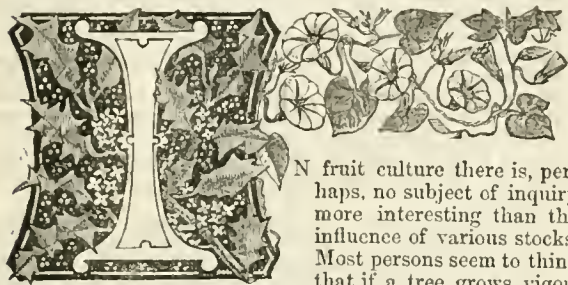
	s	d.	s	d.		s	d.	s	d.
Large Fowls.....	2	0	2	6	Pheasants	0	0	0	0
Smaller do.....	1	9	2	0	Partridges	0	0	0	0
Chickens	1	6	1	9	Grouse	0	0	0	0
Geese	6	0	6	6	Guinea Fowls.....	0	0	0	0
Ducklings	1	9	2	0	Rabbits.....	1	4	1	5
Pigeons	0	8	0	9	Wild do.....	0	8	0	9

WEEKLY CALENDAR.

Day of Month	Day of Week	AUGUST 22—28, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.	Moon Rises.		Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.		m.	h.				
23	TH	Kempsey Horticultural Show.	71.6	49.7	60.6	16	67	af 4	5	af 7	8	af 11	23	2	47
24	F		71.7	48.9	60.3	20	69	af 4	6	7	22	11	23	2	32
25	S	Wakefield Horticultural Show.	71.5	47.8	59.6	16	0	5	4	7	morn.	55	2	24	2
26	SUN	10 SUNDAY AFTER TRINITY.	71.7	43.7	60.7	16	2	6	3	7	14	0	56	3	25
27	M	Royal Horticultural Gardens open free.	72.6	48.1	60.3	12	4	5	0	6	15	1	49	4	26
28	TU	Manchester Horticultural Show.	73.4	49.3	61.3	12	5	5	67	6	24	2	34	5	27
29	W		73.0	49.5	61.2	18	7	5	55	6	23	3	13	6	28

From observations taken near London during the last forty years, the average day temperature of the week is 72.9°; and its night temperature 49.0°. The greatest heat was 89°, on the 25th, 1859; and the lowest cold 31°, on the 26th, 1861. The greatest fall of rain was 1.32 inch.

GRAFTING VINES.



IN fruit culture there is, perhaps, no subject of inquiry more interesting than the influence of various stocks. Most persons seem to think that if a tree grows vigorously it is a matter of little importance on what it is grafted, but experience teaches us more and more how desirable it is that every fact connected with this subject should be recorded. Take the Pear, for instance, how singular it is that some kinds grow well on the Quince and some cannot be made to grow upon it at all, and that amongst those which grow well some are much improved by the Quince stock, and others do not appear to be altered. Would a microscopical examination of the size of the wood-cells throw any light on this subject?

Again, how strange that several kinds of Plum stocks should be necessary to the man who wishes to propagate a collection of Peaches or Nectarines. Who can explain why a Bellegarde and Royal George will not both grow on the same stock? or why a Black Diamond Plum will not grow on the same stock as a Green Gage? It is true that experience has taught much to the man whose business it is to propagate fruit trees, but I think observation has been too exclusively directed to the effect of various stocks in growing trees, and that too little attention has been paid to their influence upon the size, flavour, and appearance of the fruit.

This is, and must be, a difficult subject of inquiry. A person who buys a healthy-looking fruit tree will rarely ask on what stock it is worked, and if he has several of the same kind on different stocks, and some do well and some badly, he cannot trace the cause. The nurseryman seldom has the opportunity of watching the effect of the stock which he has used when the tree he has sold is in a bearing state. Of course if trees generally die or do well on a certain stock the fact will soon be known, but I allude to those less easily recognised effects on the size and flavour of fruit which may be caused by soil, situation, or climate, but which may be the effect of the stock. It is because this is a difficult subject that I wish to direct to it the attention of men who think and observe. I could not imagine why Apricots called Moorpark differed so much in quality till I discovered that many, if not most of them, were budded on the Muscat Plum; knowing that the true old Moorpark would not grow on this stock, the fact was explained.

But the most singular instance of the effect of the stock which has come under my observation is the case of the Muscat Hamburg Vine. This is to me the most delicious Grape when first ripe of any I have tasted—half Muscat,

half Frontignan in flavour, with the texture and juice of a Black Hamburg, when well grown forming large handsome bunches of beautiful thin-skinned black Grapes, and appearing to me as near perfection as possible; but, alas! it has the same fault as the Grizzly Frontignan and many other fine kinds—it has tender roots, and many persons fail to grow it satisfactorily. Mr. Thomson, of Dalkeith, tried the effect of grafting it on the Black Hamburg, and was delighted with the result. I heard so much talk of the wonderful bunches thus produced that I went to Dalkeith to see them; but Mr. Thomson, with his usual caution, remarked, "After all, it may only be the result of grafting a young Vine on a strong old root." Soon after this I met a Committee of the Royal Horticultural Society at Chiswick, and on asking the name of a black Grape, was answered by one of the gentlemen present, "Why, do you not know your favourite the Muscat Hamburg?" My answer was, "If that is it, I certainly do not know it;" and I am afraid I said nothing would make me believe it to be so. Dr. Hogg, Mr. Eyles, and several others assured me they had tasted it the year before, and had no doubt it was correct to name. Whilst we were talking, I caught sight of a Vine full of fruit within a few yards of the first, which I had no difficulty in recognising, and exclaimed in triumph, "Well, what is that?" "Muscat Hamburg," said one of the gentlemen, evidently taken aback by the different appearance of the two. "And you want me to believe that those large Hamburg-like leaves, round berries, and close bunches belong to the same kind as that deeply-cut foliage, oval berry, and long tapering bunch?" "It is very singular," said one of the gentlemen; "but call Mr. Barron." Well, Mr. Barron came, and imagine my surprise when he said he grafted the first from a shoot of the second. Having a bad, late Spanish Grape he thought it only fit to be grafted with a better kind, and this was the result; the foliage was quite altered, also the fruit, and he added that it was a fortnight later in ripening, and not nearly so good in flavour. There is an old saying, "Seeing is believing," of course it never is, but I thought it is not always knowing. I have been confirmed in this opinion since I saw the spectroscope.

So interested was I in this subject that I thought it worth further investigation. Having a strong Sarbelle Frontignan Vine which I thought hardly worth a place under glass, I grafted it with the Muscat Hamburg, and also planted a young Black Hamburg previously grafted with the same variety, there being already in the house a strong Vine of this kind growing on its own roots from which I have cut several times as much as 40 lbs. in a year. Now for the result. The Vine growing on the Sarbelle Frontignan grows very strongly, but the fruit is inferior to that growing on the old ungrafted Vine. The young plant worked on the Black Hamburg is wonderfully improved, and every berry set; whilst on the two others there are many small berries. I think I have proved that Black Hamburg is a good stock for this kind, but there may be a better one.

Is it not possible other Vines may be capable of as great improvement if we only knew what would suit them?

It is evident that strength of growth is not all we require. One would imagine that if a tree grew well, made strong shoots, and large leaves, it would also produce good fruit, but the Vine worked on the Sarbella Frontignan grows very strongly, and yet its fruit is not nearly so good as that produced on the ungrafted Vine; whilst the Vine growing on the Black Hamburgh is a small two-years-old plant which has hardly had time to grow strongly. Again, those who have grafted the Barbarossa, a remarkably strong-growing kind, say that every variety of Grape tried upon it is injured. It must be clear that vigour of growth is not all we require.—J. R. PEARSON, *Chilwell*.

PRUNUS PADUS AS A STOCK FOR PEACHES.

I LIVED when a boy in a district where the Bird Cherry (*Prunus padus*) abounded, and used to wonder why it was called a Cherry, when it seemed to have no resemblance of any kind to a Cherry, but in leaf and smell was not very unlike a Peach. So, when eight years ago I settled in Yorkshire, and found the Bird Cherry again indigenous to my district, I thought it would be worth while trying it for a stock, in order to find out its affinity, but it was not until last year and the present that I was able to put my wish into practice. Curiously enough, when I went in the autumn of 1865, to look for some young specimens of the *Prunus* fit for my purpose, all the Peach trees in the district were smothered with a sudden blight of aphides, and on arriving at the glen where the *Prunus* was growing, I found the same aphid in the same abundance. This so far favoured my old notion.

On removing the stocks, I planted some in the open ground, and some in pots. All, however, suffered a very severe check, and when I tried to bud them last autumn, the bark would not run, so that I set no value upon the results of last year. Those in pots were placed in gentle heat in February, along with an equal number of Black Damask Plum stocks, and when the sap was fairly active all were grafted—the *Prunus padus* with Plums, Cherries, Apricots, and Peaches. In some cases all four sorts were worked on the same stock, and the Cherries were either May Duke or Morello. The result was, that in almost every case the Peaches grew on the *Prunus padus*, the Cherries grew for a time, and then stopped, the others gave little hope of succeeding. Of those worked on the Black Damask Plum about half succeeded. These were worked only with Plums and Peaches, and were used merely to compare the stocks under the same treatment, which was by no means the best for the purpose, as I had no proper material for plunging the plants after being grafted, and they were in consequence not plunged in anything.

As soon as the growth of the scions and *Prunus* was sufficient to show which would thrive and which would not, they were cut down again, and regrafted, putting Cherries and Plums on the stocks where the Peach had succeeded, and Peaches on those on which other fruits had failed. The only scions which grew after this severe treatment were the Peaches, which again succeeded in almost every case. Few, however, are now growing, through their having been exposed to the frequent action of crinoline. One (Dr. Hogg) I was careful to keep securely, and it was regularly stopped, and finally repotted a month ago, and is now a very promising tree, with well-developed buds, having been allowed to attain a height of about 4 feet, and with laterals 1½ foot long at the bottom.

It now remains to be seen how far the *Prunus padus*, which elaborates so much prussic acid, will affect the flavour of the fruit. Next year will, I hope, enable me to give an opinion upon this question that will be of value. My present belief is, that unless some amount of foliage is allowed to grow on the stock, the flavour of the fruit is only influenced so far as the growth of the scion is healthy or otherwise. I once by mistake grafted an Apple on the Quince, and the two trees so worked grew most vigorously for one season, and then became unhealthy. In one case I allowed the Quince to put out about a dozen leaves below the scion, and the next season the Apple so treated grew again, the other died. It is most probable that in this case the sap sent from the Quince roots was suited to the Apple; but that the sap sent down from the Apple leaves did not suit the root of the Quince. This is, however, just one of those questions that require a careful set of experiments to furnish a correct answer.—W. KINGSLEY, *South Kilvington Rectory*.

MARÉCHAL NIEL ROSE.—A correspondent in a recent number has written disparagingly of this beautiful Rose. If he will grow it on a south wall I think he will alter his opinion. From one

plant, early in June, I could cut upwards of fifty splendid blooms, all open at the same time. It certainly does not flower freely the first season after budding, but that does not alter its after-value.—BENJAMIN R. CANT, *St. John Street Nursery, Colchester*.

ABOUT THE LAND'S END.—No. 2.

SINCE I last wrote I have been over and about nine miles of the region bordering on the coast between Marazion and Lamorna Cove—names savouring of Gaelic, and reminding forcibly of Ossian, which justifies my stepping aside to observe that Gaelic, Armoric, Manx, and Cornish are really variations only of one and the same language. Now to my jottings on these nine miles of coast country.

The first object which attracted my notice is the entire absence of stiles and gates where a division is needed across a path. Instead of these nuisances, even to unencumbered legs, and most exposing nuisances to those crinoline-enclosed, broad bars of granite, usually five in number, are placed parallel to each other, level with the ground, with a space of a foot width between each and its neighbour bars, in this fashion. There is no difficulty in the way of a rational being walking across these; but the irrational—namely, horses, cows, sheep, and pigs—evidently suspect that it is a trap, and for that, or on account of some other fear best known to themselves, never attempt to cross these mystic bars.

The cottage gardens in this district are scanty in dimensions and badly cultivated, notwithstanding there is a society at Penzance, which offers prizes to those cottagers who rise superior to their fellows in gardening. However, whether cultivated well or ill, I almost invariably see Leeks, Garlic, Parsley, and Onions are within each enclosure. The reason for these never-absents, I am told, is that they are the invariable ingredients of Cornish pies—a form of culinary compounds so prevalent, that it is a common saying, "If a Cornish man caught the devil he would put him into a pie." Compounds they are of no ordinary richness, conger-pasty being formed of conger eel and Onions; Leeky pie of Leeks, bacon, and clotted cream; star-gazy pie of pilchards, with their heads piercing the centre of the crust in a cluster, as do the legs of Pigeons when similarly cooked; crockey stew is served in a metal pan, and is compounded of meat, Onions, and slices of batter pudding; squab pie is made of meat, Apples, and Onions, covered over with a crust; and veal and Parsley pie has under its crust a mixture of veal, chopped Parsley, and clotted cream.

These savoury constructions seem to be no modern inventions, for there is a record, bearing date 1369, which is explicable only on the supposition that a part of the rent reserved had regard to a provision for these Cornish pies. In that year, 42 Edward III., Margery, wife of William Whitestone (careful housewife that Margery), granted to John Ermyce two gardens in Stratton, a north-eastern district of Cornwall, on condition that he rendered annually, among other things, a hundred roots of Garlic at Easter. Norden, who wrote his "Speculi Britannie" in the reign of James I., says, speaking of Stratton Hundred, "The inhabitants are to be commended for planting orchards, which yeldest greates store of Apples, Peares, and such-like frute, whereof they make syder and perye, healthsome and profitable to drink. There is also great abundance of Garlic, the use wherof the countryman holdeth salutarie, wherof they also make a comodious vente into manie other shyres."

The said John Ermyce was also bound to dye of a red colour yearly for the said Margery four ells of cloth, and this leads me to remark further upon the old local names of plants, and upon the suggestive names of most Cornish localities. The red-coloured cloth coveted by the provident Margery must have been dyed by the aid of Madder (*Rubia peregrina*), which is a native of the neighbourhood of Stratton. Now, this is a plant still retaining its old Cornish name, *Maddre*, and I observe that the names of many of our other native plants may be similarly traced to this early language of our island. Thus, *holm*, is still the name of the Holly; and the parentage of our modern names can be discerned in *Idhis*, Ivy; *Pluman*, a Plum; *Caretyjs*, a Carrot; *Parnes*, a Parsnip; *Turnupan*, a Turnip; and *Kaatsh*, a Cabbage.

On the other hand the old Cornish names of plants introduced by the Romans acknowledge that origin. Thus, *Per*, a Pear, from the Latin *Pyrus*; *Figez*, Figs, from *Ficus*; *Eltle*, a Lily, from *Lilium*; *Favan*, a Bean, from *Faba*; and *Ros*, a

Rose, from Rosa. This last reminds me that Roseland, a very fertile district between Povey and the Fal, is so called not because it is "the land of Roses," but from the Cornish, *Rose*, a valley, and *lan*, an enclosure. Some places, however, preserve in their names records of that for which they were once famous. Thus, *Rosewarne*, is literally the valley of Alders; *Nansarallen*, the valley of Apple trees; *Roservallen*, the Apple valley; and *Trevallen*, the Apple town.

Hundreds, or, rather, thousands of acres of the nine miles of which I commenced speaking, are devoted year after year to growing early Potatoes, and early Broccoli, for the supply of London. The seed Potatoes are bought during October and November in the colder districts about Axminster and Glastonbury, for the Potatoes grown near this southern line of coast are found to vegetate earlier than is desired. The Potatoes purchased from the more backward districts are placed in single layers upon shelves in an outbuilding, where they remain until they have sprouted, and are ready for planting in February and March. The ground is dug, the sets, with the sprouts uppermost, placed at the bottom of the trench, covered with a little earth, guano at the rate of 8 cwt. per acre sprinkled over that, and then earth added, so as to cover the sets fully 3 inches. The plants are never earthed up, because it is found, as the Editors of "our Journal" have always contended, that the tuber-bearing fibres are disturbed by the hoe, and the production of tubers much retarded. The earliest time I could hear of at which a crop was taken up for market, was the first week in May. The rent for the soil on which Potatoes, Broccoli, and Mangold Wurtzel are grown here, varies from £8 to £10 per acre. The Cornish acre, which is the measure still acknowledged, is about one-sixth larger than the statute acre. Potatoes cost about £35 per acre for rent, seed, and labour, before any return is obtained. The yield is from 250 to 300 bushels per acre. I was shown a one-acre field at Gulval, the produce from which, being exceptionally early and abundant, sold in one year for £120.

So soon as the ground is cleared of Potatoes, it is ploughed and manured for a crop of either Mangold Wurtzel or Broccoli. The manure preferred is a compost prepared by placing seaweed, stable manure, and the shelly sea sand of the coast, in alternate layers. If Mangold Wurtzel is grown it is used by the grower, or sold for stock-feeding in the neighbourhood, realising from £15 to £20 per acre.

The Broccoli grown is the "Penzance White," and even on the day I write this (August 13th), I have seen it being planted on ground from which a late crop of Potatoes had been taken. For the earliest produce, however, the Broccoli plants are inserted immediately after the earliest Potatoes have been taken up, in May and June. The seed for these earliest plants is sown in February and the beginning of March. About 9600 plants are required for a Cornish acre. The earliest heads arrive in the market at the commencement of December. The average price at Penzance is one shilling per dozen, but at the utmost not more than half that price is obtained if sent in large quantities to Covent Garden Market. They are sent thither in crates holding each about ten dozen Broccolis, and weighing 2½ cwt. I saw fields that had every year yielded a crop of Potatoes and a crop of Broccoli for the last quarter of a century.

The land gradually rises from the shore, and the earliest crops are raised in the fields situated between that and an elevation of less than 100 feet. Higher elevations are more liable to checks and failures. Violent south-westerly winds injuring, and even destroying, the stems of the Potatoes are most dreaded. The Potato disease has visited the neighbourhood of Penzance this year very severely.

In the neighbourhood of Marazion is grown what is locally known as "the Marazion Turnip." It is certainly the most sugary I ever tasted. Its bulb is a very flattened globe, the largest about 6 inches in diameter, flesh white, skin at first also white, but becoming yellowish when the bulb attains its full size. Excellent as I thought that I tasted, yet this being a very late one, was said not to equal those which are in perfection as early as March. Whether this Turnip would be equally excellent if grown elsewhere, or whether that excellence depends upon the light shell-manured soil, and mild, moist climate of this vicinity, deserves to be practically determined.

Many Apples were known half a century since, which had the reputation of being raised in Cornwall. Of these were Borlase's Pippin, said to have been produced by one of the Borlases of Treluddero; Slade's Pippin; Blanchet; Hasling; Jany-gimblet; Stubbart; Whitesour; Bel-bone; Jacky-Johns; Cobble-dick-longer-skins Gilliflower, believed to have been first pro-

duced in the Polwhele Orchard, is still one of our best dessert Apples; Cloth-of-Gold, which once existed there, but was gone as long since as 1816; Blue Pippin, then well known in the Penzance market, but now never seen. It was a good dessert Apple, ripe about Christmas; yet although the fruit is not in the market, a few trees in a state of decrepitude are still in the neighbourhood. The Godolphin was also then in the Helston market. This last-named was raised in Lord Godolphin's garden, at St. James's Park, in this county. The chief dessert Apples I see in the fruit market are "the Stebbutt;" and the well-known Devonshire Quarrenden. Cider, for home consumption, and of surpassing excellence, is made in some districts of Cornwall. About thirty years ago, I am told that, the cider made from an Apple called the Duffling, was preferred, but my informant could not say whether that variety is still employed.—G.

AUSTRALIAN SPINACH.

THE above new vegetable (*Chenopodium auricomum*), which we introduced this season to this country, we have grown rather largely, and, perhaps, a few remarks on our mode of cultivation, and experience of the plant, may prove useful to those of your readers who may be inclined to give it a trial another season.

Our first sowing in the open border about the middle of April, was a failure. On the same day, however, we sowed a quantity under glass on a slight hotbed. The seeds came up very thickly, and when the seedlings had made their second leaves we had the plants pricked out into boxes, and kept near the glass. After making some growth, and all danger from frost being over, we planted them out on a piece of well-manured ground, about 18 inches apart, watering occasionally afterwards with liquid manure. The young plants when put out were but puny-looking, about 2 inches high, and with stems not much thicker than needles. The plant is of exceedingly rapid growth, and in fine weather it was astonishing how quickly it increased in size. There are many plants fully 5 feet high, and still growing, with the appearance of flowering.

Our second trial was in the open border in the first week of June, and was successful; almost every seed seemed to have germinated. This sowing is now yielding us an abundance of leaves. The leaves can be gathered when the plants are about 18 inches high. In a few days they throw out fresh leaves, which are again ready to gather, and so continue throughout the season. If we are correct in our estimate of it, this Spinach is likely to prove a valuable addition to our vegetables on account of its flavour, its productiveness, and its not having a tendency to run to seed. The flavour is similar to that of the Spinach of our gardens, but whether it has "something in it more refined, and less grassy in taste," we will leave you to judge, and herewith send you a dish for trial, with a specimen or two of the plant for your inspection. We are of opinion that the plant should be treated as a half-hardy annual with us in Scotland, although, perhaps, it may prove otherwise in the south of England.

In regard to cooking, it requires more time to boil than our Spinach, and we also think it requires more attention in the heating. We have had it put among warm water to bleach, and then boiled as ordinary Spinach.—STUART & MEIN, Kelso, N.B.

[By a report in another column, it will be seen that the Fruit Committee of the Royal Horticultural Society has undertaken to try its merits.]

THE SNOWY MESPIUS.

THIS fine ornamental tree (*Amelanchier botryapium*), is not half so generally grown as it deserves to be. Its numerous blossoms, rendered all the more attractive by the coloured calyx, attract the attention of all observers. It flowers in April and May, or rather in the latter month only. It is usually worked on the Thorn, and I suppose will attain the dimensions of that general favourite. In the autumn, when your readers are re-arranging their shrubberies and lawns, let them not forget to give a place to this tree.—J. R.

PEARCE'S GARDENER'S DELIGHT PEA.—I observe in your report of the Royal Horticultural Society's Fruit Committee, of August 6th, the following statement:—"Mr. Poynter, of Taunton, sent two varieties of Peas, one named 'Pearce's Gardener's Delight,' which proved to be *Ne Plus Ultra*." I

should be glad to know through any of your correspondents, if Mr. Poynter showed the true Gardener's Delight, and if it is considered to be identical with *Ne Plus Ultra*, as I believe I am in a position to prove such is not the case.—SAMUEL RANDALL, *Foreman to Lucombe, Pince, & Co.*

[Those shown certainly were *Ne Plus Ultra*, and a sample sown at Chiswick also proved to be the same.]

ESTIMATE OF ROSES.

I do not know whether your correspondent Mr. Flitton would number me amongst the enthusiastic novelty-seekers; but as I was the first, either amateur or nurseryman, who had what I must still esteem the honour of an introduction to *Maréchal Niel*, I should like to say a few words on your correspondent's objections. When I saw it with Monsieur Eugène Verdier at Paris I was particularly pleased with it, but even then my opinion of it was a qualified one. I said, "I am quite persuaded, if it open as well with us as it does in France, that it will be quite an acquisition;" and when it was figured I said, "There are one or two points which make us hesitate about it. It is said by M. Verdier to have been raised in the South of France, and consequently there must be some doubt as to the certainty of its opening well in England, for *Boule d'Or*, which we have seen in perfection from the neighbourhood of Paris, will not, without a good deal of coaxing, display its beauties with us; and then it is unquestionably in foliage and form of flower very like *Isabella Gray*, and therefore, we fear, is likely to partake of the defects of that flower." In all this I have not indulged in extravagant praise; and when I saw it pronounced in a contemporary as perfectly hardy, and knew that one grower of it had lost 2000 and another 1500, I could not but smile at the notion. Yet I cannot agree with your correspondent altogether. A shy flowerer I fear it will be; but I saw this time last year at Mr. Keynes's at Salisbury row after row of it, and every one of the plants loaded with flowers. On the Briar I fear it will not do very well; but Mr. Hedge, of Colchester, has succeeded in flowering it most profusely when budded on the *Banksian Rose*; and shy flowerer though it be, a bloom of it is invaluable. I have always contended it was a *Noisette* and not a *Tea*; so, I think, are *Gloire de Dijon* and *Céline Forestier*.

As to going to Rose shows to see which are the good Roses being a mistake, "*cela dépend*." Some persons wish to have one kind of Rose, some another; some grow them for the purpose of making a blaze in their garden, and others for the sake of cutting choice blooms to put in their rooms. To see which are the finest Roses there is no place better than a flower show; but to see which are the most vigorous, most showy, and most ornamental, you must go to a Rose-grower's, or ask some amateur who knows what Roses are.

Are we to take Mr. Flitton's own recommendations? Let us see. He will pardon me, I am sure; but the critic lays himself open to criticism. In dark Roses he selects seven. Of four of these there can be no doubt. Charles Lefebvre, Lord Clyde, Lord Macaulay, and Madame Victor Verdier are first-rate Roses; but I do not agree with him that the other three ought to be at the top of the list. Eugène Appert is no doubt brilliant in colour, but it is ragged; *Duc de Wellington* is a splendid scarlet flower, but not quite full enough; and Fisher Holmes has the same fault. Then he has omitted Pierre Notting, Dr. Andry, Maurice Bernardin, Duc de Rohan, and Baron Adolphe de Rothschild, all of which are worthy of a place alongside the first four, and I think far superior to the other three flowers. He gives us eight rose-coloured varieties, and here again I take exception. I have no objection to *Beauty of Waltham*, *Comtesse de Chabillant*, *Jules Margottin*, and *John Hopper*; but I think *Anna de Diesbach* a flaunting dame, *Colonel de Rougemont* a platter-face and a delicate grower, *Victor Verdier* coarse, and *Madame Thérèse Levet* I do not know. But why has he omitted such Roses as *Louise Peyronny*, *Madame Boll*, *Madame Clemence Joigneaux*, *Marguerite de St. Amand*, and old William Griffiths—all of them, I feel sure, superior to those I have objected to? I have said nothing of any of the new Roses, although I fancy such flowers as *Alfred Colomb*, *Abel Grand*, *Joséphine Beauharnais*, and *Marguerite Dombraïn* will take a good place. Nor have I enumerated all that I consider good Roses; but have endeavoured to show that even in what was meant to be a very select list, according to my view of matters great blunders had been made. But then tastes vary. I have seen legs of pork weighing some 30 lbs.

selected by soldiers here to be roasted for a treat for Christmas. I envied their digestion, but not their taste. So some people think size and display everything, and correctness of form nothing.

At the same time I think there is much in that which I have no doubt suggested Mr. Flitton's remarks—the great quantity of rubbish and inferior varieties that are every year palmed off on us as improvements—Roses of which, as my friend Mr. Radclyffe says, "there are novelties without anything new, varieties without variations, and distinct only by being distinctly worse than the older varieties." And yet what is to be done? Novelty has ever a charm to all lovers of flowers, and an excessive caution may lead to our rejecting many a valuable addition to our gardens; while to be able to send out a new Rose which shall sell at 25*s.* each is a piece of temptation that French flesh and blood can hardly resist, although I have seen some of the Rose-growers who have resisted the temptation, and cut up and destroyed hundreds of plants which they had regarded as safe to bring them in a goodly sum. I am afraid we must still buy our experience, and sometimes rather dearly; but if we were to consider more the character of the persons who raise and let out the Roses we should not be so often bitten.—D., *Deal*.

ALTERNANTHERAS—VIOLA CORNUTA.

Your correspondent "*Calcaria*" expresses a wish that I should give my opinion upon the above, and it is with much pleasure I do so. I have had several letters respecting them, asking questions too numerous to answer in detail: therefore I shall content myself, and I trust satisfy all, by offering a few general remarks.

Having great faith in the *Alternantheras* I last season propagated as many as possible: therefore, when I planted out, my plants were exceedingly small, and then to diminish them in size a small beetle, at times very numerous in the forests here, attacked them so fearfully as almost to annihilate them. However, it so happened we had a week or two of fine weather, they then began to grow and look interesting; indeed I was so pleased with *Alternanthera sessilis* *amoena* that I thought it the most lovely plant for edgings I had ever seen. Then came more drenching rains and a frost, and wet continued more or less from the end of July, 1866; indeed from August 1st we registered 9½ inches of rain. There can be no question that last summer was the most unfavourable for bedding-out that has been known for many years, and I am sorry to say the present is also very unfavourable; but the question I am asked again and again is, Will the *Alternantheras* do for bedding? All I can at present say is, my faith in them is as strong as ever. The last season was a most remarkable one, and as we have had to contend against the worst of seasons, we trust for a better future, and I also predict such for the *Alternantheras*.

Last season, in consequence of so much wet, nearly all the *Cerastium* was killed; such an occurrence has not taken place before in my time: therefore if the *Cerastium* would not grow, what could we expect of the *Alternantheras*? Still they did not succumb to the wet, but stood it bravely, although quite at a standstill. They also proved more hardy than I expected, for they have withstood 12° of frost. Therefore, taking the last unfavourable summer and the present one up to now into consideration, and looking at the progress they have made with me this season, I see no reason for altering my previous opinion respecting them and their merits as bedding plants. A fine summer will, no doubt, bring out their true character, and as they are doing tolerably well this season at Osberton, they will doubtless do better elsewhere, for a more unsuitable place for bedding could not well be met with; it lies low and wet, and is subject to early and late frosts. They are all easily kept through the winter, and make beautiful plants for the conservatory, but they require a little warmth to keep them through the winter. *Alternanthera paronychioides* is a fine bedder; this and *sessilis amoena* are the two best.

With respect to *Viola cornuta*, *Purple Queen* and *Mauve Queen* are both in perfection here, the only difference to be seen is that *Purple Queen* flowers more profusely with me, and the flowers are a trifle larger, otherwise it would take a very clever man to detect the difference. This *Viola* must be seen in its various combinations to be appreciated. I have the permission of my employer and the Viscountess Milton, the lady I have the honour to serve, to invite any of your correspondents interested in the *Viola* question to visit Osberton, and decide

for themselves the merits of the two varieties. — EDWARD BENNETT, *Osberton Hall, Worksop.*

I FIND *Alternanthera paronychioides* one of the easiest of all plants to strike when placed in a proper temperature—namely, in that of a Melon or Cucumber pit, where it will take root in the course of ten days, and be fit for potting off. After this has been done it ought to be placed in the same temperature for three weeks, and by that time the plants will be well rooted and cover the mouth of a large 60-sized pot. If intended to grow much larger they must have a larger shift and still be kept in the same temperature, for I found that after the hardening process began there was but little growth, and up to the present time the progress has been small; consequently my edgings are nothing to be compared to what they would have been. Still, every one can see at a glance what a beautiful edging this *Alternanthera* would make when planted as thickly as it ought to be—that is, the plants touching each other when first planted out.

The temperature in which I keep my plants is that of a cool pit or greenhouse, where they remain healthy. About the middle of March I place them in the stove, and I soon have plenty of first-rate cuttings.

Every one appears to be of one opinion with respect to that fine bedding plant *Viola cornuta*. Here it is a perfect gem; but my experience seems to be at variance with the recommendations given by some of your correspondents. Instead of its succeeding best in a shady place, with me just the reverse is the case, for I have a border planted along the top of a terrace on which the sun shines throughout the day, and this border has been a mass of flowers since the first week of April, and is still equally gay. On the other hand, I have two beds in a shaded corner which have never approached the border in point of display; and at the present time the plant has become so tall as to be quite unmanageable as well as unsightly.—JAMES STEWART, *Nuneham Park.*

COTTAGE GARDENS.

OF the various classes of society among which horticulture as a science has made progress during the last few years, none has, perhaps, benefited more than that to which this Journal was originally directed—the cottager. Although the flowering plants which thirty or forty years ago constituted the gems of a collection that was the pride of its owner, have considerably declined in public estimation, still the plants which have succeeded the pets of the beginning of this century serve to assure us beyond all doubt that the love for gardening has increased manifold during that period; and though the *Ranunculus*, *Auricula*, and *Carnation* may have given place to plants which the lovers of old fashions and the lovers of change alike condemn, the spirit of inquiry, emulation, and perseverance has been so successfully at work, that there can be no question the number of those who are ardently fond of their garden has very much increased within the last few years. Many causes, no doubt, have tended to promote this result. The absence of those desolating wars which broke up so many families in years gone by, the more rapid propagation of sound and useful information through the medium of the general press, as well as in the class of periodicals devoted to the especial object in view, the formation of societies whose object was to give encouragement to horticulture, and the fostering care and patronage of many of our great landed proprietors, have done much to promote a love of that science which offers the more beauty and enjoyment the more it is searched into. Certain it is that the homes of numbers of the working classes, whose callings are purely agricultural or otherwise connected with rural affairs, present, in many instances, an aspect of neatness not known some years ago. Several years since I called the attention of the readers of this Journal to the subject, and I make no apology for doing so again, as it is one that cannot be too well ventilated, nor can the merits of the various plans that are recommended for the attainment of the object in view be too well understood; for the object being a most laudable one, the various means used by private individuals to promote its advancement ought not to be lost on the rest of society for want of being made known.

Taking it, therefore, for granted that the encouragement of horticulture and of thrifty habits amongst agricultural and other labourers in rural districts is an object worthy of the patronage and assistance of their wealthy brethren, let us see

how this can be effected. Many, if not most, provincial horticultural societies assume to encourage cottagers by offering prizes for fruits, flowers, and vegetables, singly or collectively; and the quality of the produce exhibited on such occasions fully equals that from the more favoured classes. This may seem to the cursory observer a proof of the good so done, while an examination into the names given on the winning sheet will disclose the fact that the same names have figured there for some years. The competition is thus left in the hands of a few, who—being in the occupation of better gardens, perhaps, than some of their neighbours, being more ardently devoted to the attainment of perfection in the culture of their plot of ground, or having possibly acquired the art of preparing its produce for show purposes—contrive to secure to themselves the greater part of the prizes offered for garden produce. This state of things is no overdrawn picture, for there are few horticultural shows of a dozen or more years' standing where there is not ample proof of its existence. Notwithstanding that now and then stringent rules are brought to bear against the system, the number of cottagers exhibiting produce decreases rather than otherwise, and although the quality of the produce exhibited may be faultless, yet the object for which such prizes are given is not the one originally intended, and there is a difficulty in prescribing a remedy which usually baffles the ingenuity of the managing committee.

Now, having mentioned the above evil as resulting in large horticultural societies undertaking the duty of encouraging cottage gardening, it is by no means to be inferred that much cannot be effected in promoting the object in view; but then the competition must be on a less extensive scale, and instead of inviting the produce from the best cottagers' gardens in, perhaps, half a county to be sent to a large town, let there be a number of smaller shows, say one to every hundred dwellings or so, or, as is the case in the south of England in many places, one to each parish. The patronage and support of the wealthy proprietors are of course necessary to this; but the outlay will often be found an advantageous one, for habits of thrift, order, and neatness will invariably follow in the train of a well-cultivated garden, and the moral character of a district will be raised accordingly. The working of the matter should be in the hands of those who know the circumstances of each of the competitors; and these also, living as they do in proximity to each other, cannot venture on any act of fraud without their neighbours being likely to find it out. The exhibition of the produce at some given place will always afford an opportunity to those who dispute their neighbour's production being really from his own garden, to expose any impropriety that may be suspected, and its punishment of course is sure to follow.

But it is not the mere exhibition of garden produce at any one place for prizes that is the best test of the industry and good management of the various exhibitors. Their holdings must also be examined, and it is of far more consequence to reward merit displayed at home than the production of large Onions, Cabbages, Potatoes, or other useful articles; for an inspector will be able to see if the most has been made of everything, and by the condition of the various crops he will be able to judge how the grower has done his duty in times past, and what he is doing for the future. I therefore regard prizes for well-kept cottage gardens and premises generally as being of more importance than rewarding the exhibitor of produce for articles of superior merit; for accidental circumstances may sometimes assist an exhibitor in obtaining a prize in the latter case without much effort of his own, but he cannot keep a tidy well-managed garden without an amount of labour for which he is deserving of a prize. The larger fruits will all grow where the soil and situation are favourable for them, when the trees are large, without much help from the occupier of the garden for the time being, and I have seen fruit from such trees obtain prizes, whereas the cultivated part of the garden was a complete bed of weeds: this, however, is not the case where the prizes are awarded for well-kept gardens and premises generally.

In giving advice to those who may be desirous of encouraging a high state of cultivation amongst their poorer neighbours, I must beg to differ from the views entertained by many, who commence the pursuit of the same laudable object by giving an undue importance to the cultivation of flowers. Certainly, I admit that nothing adds more to the charms of a nice cottage garden than a bed of mixed flowers standing forth between its front and the public highway, but too much value has often been placed on them. They are not the most useful articles in the garden. The row of Scarlet Runner Beans, which per-

haps separates them from the plot of Potatoes, affords many a dish of excellent food, and is at the same time ornamental, and the Lettuce and Onion beds are more profitable adjuncts than Carnations or Chrysanthemums. But it must not be supposed that I would discard flowers entirely; on the contrary, let them be duly credited with what merit is their due, still let them be subordinate to vegetables and fruits.

In looking over a number of cottage gardens with a view to award prizes to meritorious ones, the directions given to judges contain so many features, that the duty requires more care and thought than is generally supposed. In general, however, it may be observed, that in country districts where such dwellings are scattered singly, in pairs, or only a few together over a district, some easy mode of taking notes of the merits or defects of each garden will suggest itself to the judges. It is different in a show-tent, where the contending objects can be inspected in juxtaposition; but to go a mile or two to refresh the memory of the features of a garden No. 13 when the inspector is perhaps at 63, is inconvenient and troublesome. To those, therefore, who may have to undertake such a duty for the first time I here beg to suggest a mode which I believe I have once before explained in the pages of this Journal, but which may have not come under the eyes of the present readers. I have at various times adopted it for twenty years or more.

Assuming, therefore, that a party of two or three jurors is appointed to look over a number of cottage gardens and premises generally, many of which may perhaps stand singly and in sequestered spots—and assuming that perhaps a hundred or more of them have to be looked over in a day, or rather in less than half a day, perhaps, as far as working hours are concerned—it becomes necessary for after-comparison of merits to take such short notes as will assign a proper position to each holding as progress is made. Now, in the brief space of time which can be bestowed on each, it would take a clever shorthand writer to note down all particulars; and even if that were done, great delay must take place at last in reading over each of the hundred or more observations so made. To obviate this, and at the same time to have a clear and distinctive mark attached to each holding, I have for many years adopted a plan somewhat resembling that recommended by Mr. Thomson for judging Grapes, which is by using figures instead of written descriptions. My plan is this: On glancing over the contents of a garden, or rather, I may say, on looking over it carefully, and ascertaining its merits as well as its defects, and taking as a guide an assumed idea of perfection to represent 100, a little thought is required to consider how far the holding in question falls short of this. It is rarely that I have met with one that I was disposed to place higher than 90; but whatever figure was thought a just and fair one was at once appended to garden No. 1, and the same to all the others in succession; so that at the end of the inspection it was only necessary to look back to the figure, and the highest, if it corresponded with the fellow-judges' opinions, was awarded the first prize. I ought also to say that it was customary for the judges appointed to discuss the figures of the first garden inspected, and thereby enable each other to judge of the position it was supposed to stand in, but all notes on the following ones were taken independently of each other; yet at the end of the inspection the respective merits of each were set down in much the same order in every book, and a decision was made easy.

The advantage of this plan is more apparent when a large number of prizes are to be awarded. For instance: a gentleman owning a number of cottages scattered variously over the parish he resided in, was in the habit of giving a liberal sum each year in prizes as a reward for the industry and good management of the occupants of the holdings, which numbered somewhere about a hundred. Now, to give this sum all to the best three was neither just nor fair, as most likely the same thing would be repeated another year. A naturally good garden, in the hands of an industrious occupant, was very likely to keep its place, or at all events the possessor of a small one, however well tilled, could not have much chance to compete with him. It was, therefore, advised to divide the gardens into two classes, large ones and smaller, and apportion one first prize to each, that for the larger garden being somewhat more than for the small one. The after-apportionment of the prizes was often left with the judges, who not unfrequently placed three or four as seconds, and a still greater number third, and even fourth prizes were awarded to half a dozen or more, the result being that often one-half of the occupants received prizes. Of course no one was awarded a prize who did not

deserve it, but a small prize was always encouraging; and the interest felt in the matter, with the knowledge that an inspection was annually made, kept up a higher state of order and neatness than would have been the case amongst the more careless; while amongst the industrious and enterprising a great stimulus was given, as all the deserving were sure of a prize, and the higher its grade so much the more honour. I may also add that in some cases the inspection by the judges took place three or four times during the summer, and at periods when least expected by the occupant, and the prize given or withheld in accordance with the general character of the holding at all of the times.

In recommending a mere column of figures to represent the condition of the object looked at, it does not follow that other notes might not be taken also; a few words, perhaps, may do; but in most cases figures will better represent all that is wanted where a great number of gardens must be looked over. To those who like to go into detail, I may say that I have sometimes ruled a wide sheet into narrow columns for figures, and allotted one for vegetables, one for fruits, one for fences (which are an important matter in cottage gardens), one for flowers, one for window plants, one for wall trees or climbers, and one for general cleanliness and order, with one column as a total—the last not the added-up amount of all the others, but simply its position as so much below the ideal number of perfection, 100. The advantages of the above details are, that when comparing notes with a fellow juror at the conclusion of the inspection it is easy to refer to such a cottager being either strong or weak in each department, and to discuss merits without the inconvenience of a second visit.

The above as a mode of giving encouragement to deserving cottagers for managing their plots of ground at home, is by no means put forth as a plea against exhibitions of garden produce as well; on the contrary, the two systems can be worked together, and often are; and the exhibition being an affair which the public at large take pleasure in seeing, it is at all times advisable when the funds are forthcoming to have one, for however small the prizes there is always an honour in being first, and a good competition is often ensured. Many instances of the good effects of such an exhibition might be cited, as well as of the generosity of those who patronise such exhibitions, and who, deserving all praise for their exertions in such a cause, prefer the self-approbation of doing such good deeds in private.—J. R.

PEACH TREE PRODUCING BOTH PEACH AND NECTARINE FRUITS.

WE have growing in the gardens here an old Barrington Peach tree which has produced in three different instances both Peaches and Nectarines on the same wood, and in one case a Peach, a Nectarine, and a fruit half Nectarine and half Peach, one side of it being rough and woolly, and the other smooth, all on the same shoot. Perhaps you or some of your readers will kindly inform me if this is not an uncommon occurrence, as I have never seen anything of the sort before during an experience of upwards of fifty years, as well as several friends to whom I have shown it.

The shoot mentioned, with the three fruits on, will probably be exhibited by a friend of mine at the next meeting of the Royal Horticultural Society.—DAVID SPARY, *Gardener to G. R. Marten, Esq., Marshall's Wick, near St. Albans.*

[It is not a common occurrence, but instances where it has happened are not unfrequent.]

IMPROVED No. 1 PEA.

IN the spring of this year we had a few quarts of a Pea sent to us by a very intelligent gardener, under the name of "Improved No. 1." We sent a little of this Pea to Chiswick this season for trial, and at the same time sowed the remainder ourselves in our trial grounds. This variety has been pronounced by the Committee as identical with Dickson's Favourite. Several of the London and provincial trade, however, who have known and grown the latter variety from its infancy, and who have seen the two here growing alongside of each other, say that they are different. We forward you a sample of the "Improved No. 1." What do you say it is? If you are of opinion that it is Dickson's Favourite, we shall dispose of our stock of seed as such.

No doubt there are already too many so-called varieties of

Peas in cultivation, and we would gladly see these limited to the best in each class. Some persons, however, are apt to think that the Committee dismiss some sorts rather too summarily, at the same time the gardening public ought to feel deeply indebted for the careful and excellent reports which have of late emanated from the gardens of the Royal Horticultural Society at Chiswick.—STUART & MEIN, *Kelso, N.B.*

[We have no hesitation in saying that the sample sent of your "Improved" Pea is Dickson's Favourite. It was so considered by the Committee of the Royal Horticultural Society, who always bestow great pains in the examination of the subjects submitted to them, and exercise a great amount of deliberation before coming to a final decision. Composed as the Committee is, of representatives of every branch of horticulture, their decisions may safely be accepted as unbiassed and truthful.]

ROYAL HORTICULTURAL SOCIETY.

AUGUST 20TH.

FLORAL COMMITTEE.—There was rather a scarcity of plants and flowers at this meeting. A few seedling Dahlias made their appearance, sufficient to remind the Committee of the worrying work which is likely to be cut out for them during the next few meetings: we say worrying, because there is so little novelty to be expected. There is a great sameness among the good flowers, and very few come up to the standard acknowledged by the florist. Mr. Keynes, Salisbury, exhibited several seedling Dahlias—Mrs. Dodds, a pale blue tipped with a darker shade, received a second-class certificate. Caroline Tetterell, a light ground, tipped, likewise had a second-class certificate. The flowers were not in good condition, probably many of them will be shown again. Mr. Keynes also exhibited a box of several fine specimens of that exquisite yellow *Rosa Marechal Niel*, and a special certificate was awarded for it. Mr. Hopkins, Brentford, sent seedling *Dahlia Excellent*, good outline, but flower too small. From Mr. J. Pope, Chelsea, came seedling *Dahlia Rath*. Mr. Brockhurst, gardener to A. Turner, Esq., Leicester, brought a very pretty *Cattleya*, a kind from Demerara. Mr. J. Richardson, Darlington, contributed fronds of a hardy Fern, a variety of *Athyrium*, but without the plant it was impossible to ascertain its merits. Mr. W. Muir, gardener to Sir Philip Egerton, Oulton Park, exhibited four seedling *Verbenas*—viz., *Robusta*, *Columbine*, *Brilliantissima*, and *Little Nell*.

Rev. E. Hawke, Willingham Rectory, sent cut flowers of seedling *Hollyhocks*; *Ruby Queen*, a magnificent flower, fully justifying its name, received a first-class certificate; *Gem*, a pale silvery rose, was also awarded a first-class certificate. These two seedlings were much admired. Mr. Chantor sent nine seedling *Hollyhocks*, of which *Alba superba* was awarded a first-class certificate, and *Walden Queen*, a pale flesh-coloured compact flower, had a second-class certificate. There were several others of great merit. A special certificate was awarded the collection.

W. W. Baller, Esq., exhibited a curious *Orchid* (*Warszewiczella aromatica*), very highly scented. The same plant was sent by Messrs. Low to the last Meeting, and received a second-class certificate. Mr. Butler, Clapham, sent a seedling *Fuchsia* of 1856 without a name, and without any merit; Mr. Bull, Chelsea, *Calamus adspersus*, which received a first-class certificate, and *Calamus elegans*, which had a similar award. These are very ornamental plants. From the same exhibitor came also *Echites rubro-venosa*, *Lomaria falcata*, *Alsophila Leichardiana*, a superb tree Fern—first-class certificate, a collection of *Zonal Pelargoniums*, and an interesting group of plants, including *Vallota parviflora* and *Vallota eximia* in fine order. Messrs. E. G. Henderson, Wellington Road, sent *Ixora crocata rotunda*, a very great improvement in *Ixora crocata*; a first-class certificate was awarded. Messrs. Henderson likewise exhibited *Ixora crocata elegans*, not equal to the others, and *Pelargonium elegans plenum*, rather confused, and not free-flowering. Mr. Standish exhibited a tree *Picotée*, named *Ascot Yellow*, very free in flowering, colour pale yellow; it was awarded a first-class certificate. Messrs. Downie, Laird, & Laing sent a seedling *Pelargonium* of the Hybrid *Nosogay* section, having a fine truss, but not equal in other qualities to others. From Mr. Parsons, Welwyn, came *Athyrium Flix-fomina ceratophyllum*, a distinct variety, for which a first-class certificate was granted. Mr. Eckford, gardener to the Earl of Radnor, Colehill, received a first-class certificate for seedling *Verbena The Cure*, a deep rose with a very deep-shaded centre. He also exhibited *Zonal Tricolor Miss Rath*, light-edged; *Miss Annie*, white with rosy zone, rather a promising plant, and *Lady Folkestone*, also a promising plant. It may be useful to inform the Fellows that a contest among the *Tricolor Pelargonium* growers will be held on the 17th of September, the arrangements for which are in progress. The next meeting will be held on the 3rd of September.

FRUIT COMMITTEE.—There were various prizes offered for fruits. In Class A, for the best dish of Peaches grown on an open wall, Mr. Lynn, gardener to Lord Boston, Hedsor, took the first prize; and for the Peaches grown in an orchard-house Mr. Douglas, gardener to F. Whitburn, Esq., Loxford Hall, Uford, was first with *Early York*, very fine and brilliantly coloured. In the class for *Apricots* grown on

an open wall there were three exhibitors—namely, Mr. Lynn, Hedsor, Mr. Earley, gardener to F. Pryor, Esq., Digswell, and Mr. John Cox, Redleaf. The first prize was adjudged to Mr. Earley, whose *Mooreparks* were large, handsome, and delicious. There was no competition in the classes for *Nectarines*, either for wall or orchard-house fruit. In the former Mr. Lynn exhibited *Hunt's Tawny* and took a second prize, and in the latter Mr. Douglas received a first prize. Mr. Tegg, gardener to the Duke of Newcastle, Clamber, sent a dish of very fine *Grosso Mignonne* Peaches, and was awarded a special certificate for their meritorious production. A first prize was awarded to Mr. John Cox, Redleaf, for three dishes of *Plums*, consisting of *Haling's Saperb*, *Jefferson*, and *Green Gage*.

Mr. Webb, of Calcot, near Reading, sent a seedling *Plum*, which bore considerable resemblance to *Fotheringham*, but it was not of sufficient merit to receive a certificate. Mr. Whalley, gardener to the Bishop of London, Fulham Palace, sent two *Melons* perfectly distinct, which had been raised from seed taken from the same fruit. They were both round, one highly netted and the other quite smooth; the former was very well flavoured, but the latter much inferior. Mr. Earley, of Digswell, sent two fruit of Dr. Hogg *Melon*, neither of which was quite ripe, but one of them gave good indications of the high flavour which this variety possesses when fully ripe. Mr. Earley stated in a communication that he appreciated it for its continuity of bearing, he having cut from the same plant fruit which was exhibited at the Bury Show on the 16th of July and consecutively till the present time. As it was not sufficiently ripe to gain a first-class certificate, Mr. Earley was requested to send it again. Mr. John Perkins, gardener to Lord Heniker, Thornham Hall, Suffolk, sent a dish of the *Queen Anne's Pocket Melon*; and from Mr. William Cox, gardener to Lord Beauchamp, Madresfield Court, Malvern, came a seedling *Grape* raised from *Black Alicante* crossed by *Muscot of Alexandria*. The bunch is quite of the same form as that of *Muscot of Alexandria*, long and tapering, with good shoulders. The berries are large and long-oval or *Olive-shaped*; skin jet black, with a fine bloom; berry-stalks short, stout, and warted; skin tough and membranous; flesh firm, very juicy, rich, sugary, quite brisk and vinous, and possessing a distinct *Muscot* flavour. This splendid *Grape* received a first-class certificate.

Mr. Samuel Bradley, of Elton Manor Gardens, Nottingham, sent a seedling *Apple* from *Keswick Codlin*; Mr. Joseph Jackson, Blake-down Nursery, Kidderminster, a seedling *early Apple*, which was past its best, and the Committee could not form a judgment on its merits. Mr. B. Webb, of Calcot, also sent a seedling *Apple*, which, however, had not merit sufficient to entitle it to a certificate. From G. R. Martin, Esq., Marshall's Wick, St. Albans came *Peach* and *Nectarine* fruits on the same bearing shoot, and to which reference is made in the preceding page.

Mr. Tegg, of Clamber, sent a dish of *Guava* (*Psidium Cattleianum*), in fine condition; and Mr. Evershead exhibited, through Messrs. Wrench & Sons, of London Bridge, two new *Peas*, which, however, the Committee did not adjudicate upon, but requested that seed should be sent to Chiswick, where an opportunity may be had of comparing them with other varieties.

Messrs. Stuart & Mein, of Kelso, sent specimens of the *Australian Spinach* (*Chenopodium anricomum*), which were ordered to be cooked and a report to be made to the next Meeting of the Committee. Mr. Gadd, gardener to Lord Middleton, Wollaton Hall, Nottingham, sent fruit of the *Cherry Tomato*, which had been received from California, and from Messrs. A. Henderson & Co., Pine Apple Place, Edgware Road, came fruit of a seedling *Cucumber*, called *Champion of St. Albans*.

GENERAL MEETING.—W. Wilson Saunders, Esq., F.R.S., in the chair. After the usual election of Fellows, and the admission of the *Tanaton Dean Horticultural Society* into union, the Chairman remarked that it had occurred to him, on seeing the specimens of *Lilium auratum* which had been exhibited, that it would be very desirable to see what could be done by hybridising it with other species, with the view of uniting to its fine form other colours. The French had worked upon *Lilies* to a considerable extent, and had succeeded in raising numerous varieties, and he thought English horticulturists ought to see if they too could not make a step ahead. Success, he believed, only required patience and a little investigation, and he was sure that among all the beautiful tribes of plants the *Lilies* were one of the most worthy of such a trial. The subject of hybridisation was of the greatest importance to the horticulture of the present day, and one which ought to be taken up.

The Rev. Joshua Dix remarked that the Meeting on the 17th of September would be rendered interesting by a competition of *Variegated Zonal Pelargoniums*.

NEW PRESERVE.

Now that the season of fruits is come, we have to introduce to the notice of our readers one which has hitherto been neglected as being unworthy of notice for any useful purpose. We are indebted to Dr. Henry Rogers, of East Grinstead, for calling our attention to the fruit of *Amelanchier botryapium*, or *Snowy Mespilus*, which he has most successfully preserved

in the ordinary way, by boiling it with sugar. It forms a rich preserve of a novel character, and its kernels contribute to it a fine almond flavour. He has also dried the fruit and used it in the same way as grocers' Currants.

RAMBLES IN COWDRAY PARK.

As well as being a most charming spot, few places in this country are considered more beneficial to health than that part of Sussex in and near Midhurst. The eastern suburbs of this rural town connect it with the domain of Cowdray, one of the residences of the Earl of Egmont. It is bounded on the south by the South Downs, which here run inland, and almost join the Surrey hills; thus placing the district, as it were, in the centre of a basin made by the curvature of the hills that surround it.

Three centuries have nearly passed away since the existence of Sir William Fitzwilliam, Earl of Southampton, in whose days was raised a stately edifice, now an irretrievable ruin, on the borders of the extensive piece of ground which he had previously obtained a royal license to enclose and name Cowdray Park. After the death of this nobleman it became the property of the Viscount Montague, and it is with the events relative to this family that interest is awakened in the history of the place. Although his lordship was a staunch Roman Catholic, yet his fidelity to Queen Elizabeth was not impaired by his religion; for history tells us that, in 1591, she stayed five days at Cowdray on a visit to Lord Montague, who had attended her at West Tilbury with two hundred horsemen.

In one of the "close walks" a round open spot is preserved, which, we are told, is where the Queen once dined in a summer-house overshadowed by Yews, which here flourish in great luxuriance and beauty.

About a mile from this spot another relic of the past may be seen. It is "Queen Elizabeth's Oak," traditionally said to be that under which Her Majesty stood, and brought down with a crossbow several deer that were driven past her. This lordly tree has now a most picturesque appearance, and carries its trunk to a great height, where it sends forth its huge majestic branches far and wide in the air: at 4 feet from the ground the trunk measures 36 feet in circumference.*

The descendants of Lord Montague appear to have adhered to the religion of their ancestors until the seventh of the line, who became a Protestant. He enlarged and improved the park, and we are told that a magnificent clump of Chestnuts close to the town was planted by him.

The fate of his son and successor, the last Lord Montague, will never lose hold upon the mind of those who are told the story. In the summer of 1793 he left England on a continental tour, and on arriving at the famous falls of Schaffhausen, in Switzerland, made a rash attempt to navigate the cataraacts in a flat-bottomed boat, and was drowned. Before the melancholy news reached England his ancestral home was laid in ruins by fire, and the splendid paintings and the beautiful statues, together with the curious antique fittings and furniture, besides other valuables which had adorned the walls for ages, were no more seen; in fact, everything was destroyed, with the exception of a few relics, which are of but little value, and are now preserved at the gardener's house. Tracings of the paintings may be seen even to this day, and the windows of the hall and chapel are nearly entire; also, inside of the quadrangle lies a piece of the carving in wood which belonged to the "Buck Hall," and the entrance gateway is adorned with the arms of Sir Anthony Browne, favourite of Henry VIII., and Standard-bearer of England.

The estate of Cowdray now devolved upon Lord Montague's sister, and this lady became the wife of W. S. Poyntz, Esq., who, about a mile from the ruins, built a cottage ornée, and called the same Cowdray Lodge, which, though not possessing any features of architectural interest, is a comfortable and commodious house. There is now a fine Camellia trained against the front, and it frequently bears upwards of a thousand flowers.

After the death of Mr. and Lady Poyntz, this house was sold, in 1843, with the demesne, to the Earl of Egmont, the present owner of the estate. Although the original license to impark gave the limit of six hundred acres, I believe its present size

to be about eight hundred acres, and that there is nearly the same number of deer kept here.

Anthony, the eighth Viscount Montague, employed the celebrated "Capability Brown" to reconstruct the landscape, but under the auspices of Mr. Gilpin subsequent alterations have been made more in accordance with the natural scenery, and, consequently, in purer taste.

The fruit and kitchen gardens lie at the south end of the mansion. They are not very extensive, but well planned, and in the best of situations, consisting of $3\frac{1}{2}$ acres of gently sloping ground, commanding a southern aspect. The walls which enclose these gardens are 11 feet high, and are of great thickness. The many fruit trees of various kinds trained against them are in excellent condition, and are this season bearing an abundance of fruit. The fruit also appears to be earlier here than in many other gardens, and this fact coincides with what Mr. Spring informed me with regard to his being provided with ripe fruit from eight to ten days sooner than his neighbours. The reason, I suppose, is the sheltered situation of the gardens.

In the middle of the kitchen garden is another wall unconnected with the walls that surround the gardens. It is 300 feet in length, and is covered on both sides with fine fruit trees. Should the suggestion be ever approved of, an excellent range of vineries might be erected against this wall. No situation here could be better, and this would be the starting of the first noble glass structure at Cowdray gardens, for it is only just to say, that at present this beautiful place is without anything of the kind.

On the east side of Lord Egmont's cottage is a cleared space of ground of many acres. Here and there stand apart remnants of an ancient forest which has long since yielded to the demands of the British Navy, and the felling of these monarchs of the forest in the different parts of the park, has opened up the avenues and "close walks" of Cowdray, which are distinctly seen at a great distance; indeed, it has much improved the scenery of the park, which it is said surpasses anything of the kind that can be found at Goodwood, Arundel, or any place for miles around.

Then there are walks bordered with Rhododendrons 15 or 20 feet high, and rich with Ferns and Feather-grass; these wind in every direction, now touching on the park above, now leading to the brook below which divides this part from the meadows, through which flows the Rother, and from the neighbouring corn fields.

In the private walks that lead from the ruins to the gardens, half a mile or more in length, the foliage is of a different character, less grand and massive, but more sylvan, light and elegant boughs interlacing in every direction, and the light struggling down in broken patches through their feathery foliage, or some distant vista. In an article recently written on "Our Native Trees," the author says, that "When we look for beautiful landscape, we look for wood and water; they are necessary in our conception of natural beauty." And surely they are here in rare perfection, for the scene is one of extreme rural loveliness. The whole park is belted in by these extensive avenues and "close walks."

At the Easebourne gate, two of the splendid avenues meet, one long one of Limes, which diverges towards the Midhurst gate, and the other, nearly a mile in length, of Spanish Chestnut trees, of noble size, which extends to a wicket gate that leads from the park into the village of Easebourne. The fruit of the magnificent Chestnuts is given to the poor of the neighbourhood, and it is no slight boon, as many as would produce £7 or £8 having been gathered from one tree, and there are many hundreds of them. It is said that four hundred bushels of fruit have been gathered from the other trees with which the park abounds, but these are sent to the London market. Close to this avenue is a Beech tree, the stem of which measures 22 feet in circumference. I have no doubt that some of your readers have a partiality for famous trees; I therefore subjoin the measurements of a few of those the park contains, and which, perhaps, have resisted the storms and tempests of a thousand years. All the trees mentioned below were measured at 4 feet from the ground.

Leaving the avenues for the present, and crossing the brow of the hill, which was once the Easebourne racecourse, three pollard Oaks are visible on the high ground in the distance; these are called "The Milkmaid's Oaks." Their stems measure respectively 18½, 22, and 23½ feet in circumference. Continuing the walk by the clump of Yew trees on the right, we presently find ourselves on the verge of a valley, which is the

* In one of Mr. Murray's handbooks, recently written for the use of travellers in Yorkshire, I find that the famous "Cowthorpe" Oak is 36 feet 8 inches in girth, consequently only 8 inches more than "Queen Elizabeth's."

"Deer Down Bottom." Here there is a pond, and the remains of two avenues meet at right angles. At the intersections of these avenues are five more large Oaks, the boles of which, with the exception of one tree, measure over 29 feet, the largest being the "Queen Elizabeth's," spoken of before. The "Amphitheatre" is a circle of trees within a fence of palings that lies in a northerly direction. These trees are Spruce Firs from 8½ to 14 feet in girth, and averaging 120 feet in height; also a Larch in girth 9½ feet. Returning southward by the right-hand side of the clump of Yews and several more pollard Oaks, all remarkable for the immense size of their stems, and handsome heads of foliage, Cowdray Lodge is now at no great distance. On the lawn are fine specimens of Rhododendrons: a Rhododendron ponticum covers an area of 38 yards. Several plants of other ornamental trees and shrubs are also worthy of remark. There are two large trees of Cedar of Lebanon each 14 feet in girth, and a Silver Fir 13 feet, once of prodigious height, from which a length of nearly 50 feet was blown off in the great storm of November, 1837.

A few more remarks, now, about the "close walks," already noticed. They are in a small wood adjoining the wharf, and quite separated from the park by the river. They are fenced in, and the gates are kept locked, so they can only be visited by making application to the head gardener, who has the sole privilege to admit those he thinks proper. On entering the gate, the right hand walk should be taken, and very soon the avenues are reached. There are four of them, joined so as to form a square, with circles of Yew trees in the centre, interspersed with other trees bearing lighter foliage, and the effect is singular. On the top of a mound here is the spot where Queen Elizabeth dined at a table 24 yards long. The wood also contains a chalybeate spring.

The common, which lies on the west side of the river Rother and Cowdray Park, is very extensive as well as picturesque. It almost reaches to the foot of the hills, which rise to the south-west and west; and the wooded heights of Harting and Upp Park are clearly visible on that side, whilst on the other those of Cowdray raise their stately heads. The common is also valuable for the peculiar richness of its Heath, as there are so many varieties, even a white one, which I believe to be very uncommon in this country. It is not a variety though, as erroneously called by some; but, like the white wild Hyacinth, Bugle, &c., a sport, and cannot well be accounted for: however, it is an exceedingly pretty Heath.

The noble owner of Cowdray very kindly allows the public to visit the ruins and avenues of the park; and it is pleasing to add, in the interest of my brother gardeners, all who are desirous of seeing the private grounds and gardens will, I am sure, find Mr. Spring, as I did, as kind and courteous as he is intelligent; to him I feel much indebted for his efforts to gratify me with interesting information regarding Cowdray Park.—GEORGE NEWLYN, *Dangstein*.

BRIAR VERSUS MANETTI STOCKS FOR ROSES.

PRAY do not let the Rev. Mr. Radclyffe mislead amateur Rose growers by condemning the Briar as a stock. I contend that for Rose soils—that is, strong rich loams—the Briar will produce better and more enduring plants than the Manetti. My experience also teaches me that ninety out of every hundred of the flowers staged by the best exhibitors of the present day are cut from plants budded on the Briar. I like the Manetti stock very well; all I have to say is, Do not be persuaded to abandon the Briar for it, excepting on poor light soils. I hope Mr. Radclyffe will be able to class me among the favoured few worthy of being called rosarians.—BENJAMIN R. CANT, *St. John Street Nursery, Colchester*.

GRAPE-JUDGING.

THE various opinions expressed upon this subject in your columns are undoubtedly very interesting, and I have no doubt quite requisite for the thorough discussion of the subject, but are they calculated to accomplish anything definite? Taking it for granted that the Fruit Committee of the Royal Horticultural Society will interest themselves in the matter with a view to settling the question, I think they will not like to work from the mere opinions of other men; and as the season is fast advancing, I consider that it would be well to set to work in some practical form as soon as possible. I therefore beg to offer the following suggestions—That the Fruit Committee be

solicited to take the subject in hand; that persons wishing to render assistance should state their views in as concise a manner as possible, and send samples of Grapes calculated to support those views to the Committee; and that every meeting of the Committee be open to receive such contributions until this time next year, so that Grapes of all seasons may be tested. This mode of proceeding would simplify the duties of the Committee, and assist them in arriving at a correct conclusion respecting flavour and colour.

This difficulty, I may here observe, seems only to exist in the case of the Black Hamburg. No person seems to venture to assert that Lady Downe's, Alicante, Barbarossa, or Black Prince is better when not so black; and it is singular that the Black Hamburg should be an exception to the rule, as everything seems to indicate that black is its natural colour, the same as in the case of the others. I have long been convinced of the justice of the remark made by Mr. Temple and others, that Black Hamburgs of the finest quality are quite black and apparently ripe a considerable time before they are ready for the table, but they have been exposed to the full influence of sun, to a free circulation of air night and day, and to the light. I have also proved the truth of the statement made by Mr. Thomson and others, that it is possible for Grapes to be perfectly black, yet never acquire a fine flavour, remaining sour; but it is when grown in a cool shady atmosphere, and without the action of the agents above alluded to. It is this fact that makes me think it is better on all occasions to taste Grapes. I do not think that any reasonable gentleman or gardener would object to it.

I would also strongly recommend Mr. Thomson's ten points of excellence to the due consideration of the Committee; they will in all cases give flavour and colour combined a great influence, but the other points will prevent the value placed on colour exercising any undue influence when not combined with flavour.

I cannot see how Mr. Alliston can make it appear that according to this rule the Frontignans would beat the Black Hamburgs. Take for instance the Black Frontignan, which from its peculiar qualities is the most formidable. Supposing each variety to be equal as to merit of cultivation, they would stand thus:—Black Hamburg—flavour, 2 points; colour, 2; size of berry, 2; size of bunch, 1; shape of bunch, 1; bloom, 1; total, 9 points. Black Frontignan—flavour, 3 points; colour, 2; size of berry, 1; size of bunch, 0; shape of bunch, 1; bloom, 1; total, 8 points. This, even by allowing the Frontignan an equal number of points for form of bunch, still gives the Black Hamburg an advantage of one point. The Red or Grizzly Frontignan would be still farther behind, as it would have no points for colour. Perfect specimens of Muscat Hamburg are the only Grapes from which, according to Mr. Thomson's rules, the Black Hamburg would suffer, and this would be perfectly consistent. I should like to induce that gentleman to give one more point to bloom.—THOMAS DIXON, *Waterdale, St. Helen's*.

VINE MILDEW.

A GARDENER'S life is a constant warfare against insect and vegetable enemies; but, perhaps, there is nothing more thoroughly disheartening than the first severe attack of Vine mildew. A gardener who has once suffered from this scourge is quick to perceive indications of the pest. In the first instance he may, and generally does, allow it to become thoroughly established, when it is next to impossible to save the crop of fruit or prevent injury to the Vines.

There is no doubt that a damp, still atmosphere—that is, a want of heat and ventilation, is a predisposing cause, but I feel convinced that there are other and more powerful causes in operation. I think I have proved that planting Vines in a soil that is unsuited for them will render them liable to mildew, and that if from any cause their root-action is impeded they will be very likely to be attacked.

My Vines never suffered from mildew till I potted several hundreds in some nice-looking soil, which I afterwards found was full of protoxide of iron. These Vines did not grow at all as I could have wished, and were soon attacked with mildew. Being ill in bed, and my men never having seen mildew before, it became so thoroughly established as to render the Vines quite unsaleable, and I was strongly advised to throw them all away. These plants were cut down and potted in good sandy turf in the following spring, grew strongly, and never showed a trace of the disease.

Again, I have seen a Vine growing in a first-rate border

attacked with mildew, and found its roots had been bitten by the grub of the Vine weevil. Repeated dressings of sulphur kept down the mildew till the Vine had made good healthy roots, when it ceased to be attacked, and made fine, healthy foliage. I have also known Vines growing in heated borders to be often attacked, and believe that over-dryness at the root was the cause.

Anything which militates against the health of a Vine seems to render it liable to the attacks of mildew, red spider, &c. For this cause, amongst others, I should hesitate to recommend heated borders, unless I were sure they would always be under the care of a first-rate man. Who does not know how liable such borders must be to become too dry; also, how difficult it is to saturate soil which has become thoroughly desiccated? I know I shall be considered very stupid to doubt the propriety of heating borders, which is now so fashionable; nevertheless, I do doubt its being necessary, or even advantageous in most places. In a cold wet district under first-rate management we know such borders answer well; but we also know that equally good, if not better, Grapes are grown in unheated borders. Let a border be made upon dry land raised 2 or 3 feet above the surface of the soil, and composed of light and porous materials, and I do not believe that it will be necessary to heat it from below.

When I was a boy I remember seeing a Vine which was trained across three houses; it was in flower in one house, the Grapes were half-grown in the second, and quite ripe in the third. I believe it was planted in the middle house and trained right and left, but of this I am not quite sure, nor is it important. These flowers, and green and ripe Grapes, all grew on one root, showing, I think, that the temperature of the atmosphere has more effect on a growing Vine than the temperature of the soil. I am well aware what a great effect bottom heat has in promoting growth, and I know also how necessary it is to guard against the dangers which often follow its employment artificially. What I contend for is, that Vines planted inside a house do not require it; also, that if the border is properly made, and covered early enough with litter to a sufficient thickness, it will, even when outside, never be too cold for a Vine to flourish and fruit. Also, that the danger arising from heating borders artificially will in any but the most skilful hands more than counterbalance the advantages. A friend of mine says heated borders produce raisins, not Grapes, as a rule. I have seen reason to think they are (except where very well managed), productive of red spider and mildew.

I would advise those who have any suspicion that their Vines are from any cause liable to be attacked by mildew, not to wait till they see the leaves white all over, as if covered with particles of fine flour, before taking means to destroy it. A Vine may be severely attacked without mildew being visible to the naked eye. The mycelium of the Mushroom permeates the bed before we see the fungus we call a Mushroom on its surface. In the same manner I have seen the under side of a Vine leaf covered with mycelium plainly enough seen under a microscope, when nothing could be detected with the naked eye. I think it is obvious, that dusting the upper side of a leaf with sulphur can in such a case have but little effect.

In conclusion we may congratulate ourselves, that we have in sulphur a thoroughly efficient remedy for the Vine mildew; but it must, I think, be applied before the disease has taken firm hold, and to both sides of the leaves. If the house can be kept warm, dry, and well ventilated, the success of the remedy is more certain; but what I would most insist upon is, that when Vines are attacked by mildew it is necessary to inquire whether the soil or management of the Vines are not in fault, as I believe when all is right mildew gives little trouble.

—J. R. PEARSON, Chilwell.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

DENDROBIUM BULLERIANUM (Mr. Wentworth Buller's Dendrobium).—*Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria. Native of Moulmeine, whence it was imported two or three years ago by Messrs. Low & Co., of Clapton. Mr. Wentworth Buller, of Stretton-leigh, Devonshire, who was the first to flower it, describes it as being of very easy cultivation in the Dendrobium-house, where it flowers in spring. Flowers produced in twos and threes, creamy white, faintly tipped with rose, with a large circular yellow spot in the lip, streaked with reddish orange.—(*Bot. Mag.*, t. 5652.)

EPIDENDRUM CNEMIDOPHORUM (Sheathed Epidendrum).—*Nat. ord.*, Orchidaceæ. *Linn.*, Gynandria Monandria. Native of Guatemala, at elevations of 7000 feet or more above the sea. Discovered many years ago by the late Mr. Skinner, but not introduced alive till 1864. A fine specimen of it flowered at Sir Philip Egerton's, at Oulton, last spring, and was shown at South Kensington. It succeeds in a Mexican-house, and as the roots are large and fleshy, it requires abundant pot room, the pots being filled with a mixture of broken potsherds, sphagnum, and fibrous peat. Flowers in nodding, many-flowered racemes; sepals and petals white at the back, pale yellow mottled with rich reddish brown inside; lip divided into three fleshy lobes, and in colour creamy white tinted with rose.—(*Ibid.*, t. 5656.)

BEGONIA BOLIVIENSIS (Bolivian Begonia).—*Nat. ord.*, Begoniaceæ. *Linn.*, Monocia Polyandria. Originally discovered by Weddell, in the Cordilleras of Bolivia, and exhibited this summer by Messrs. Veitch, both at Paris and South Kensington, where it attracted general attention. Flowers drooping, 2 inches in length, bright scarlet.—(*Ibid.*, t. 5657.)

PROSTANTHERA NIVEA (Snow-white Prostanthera).—*Nat. ord.*, Labiata. *Linn.*, Didynamia Gymnospermia. Native of rocky hills in New South Wales and Victoria. Flowers pale lilac and white, but not showy.—(*Ibid.*, t. 5658.)

CESTRUM ELEGANS (Purple Habrothamnus).—*Nat. ord.*, Solanaceæ. *Linn.*, Pentandria Monogynia. Native of Mexico. Well known under the name of Habrothamnus elegans as one of the best of greenhouse climbing shrubs. Flowers tubular, an inch in length, purplish red. Berries globular, from half to three quarters of an inch in diameter, deep reddish purple, in magnificent Grape-like clusters. Fruited by Messrs. E. G. Henderson & Son.—(*Ibid.*, t. 5659.)

AGAVE XYLONACANTHA (Woody-thorned Agave).—*Nat. ord.*, Amaryllidaceæ. *Linn.*, Hexandria Monogynia. Native of Real del Monte, Mexico. A stemless species, with thick, succulent, glaucous green leaves, from 2 to 3 feet long, and from 3 to 5 inches broad, spreading all round, and having white, woody spines. Scape 9 or 10 feet high; flowers greenish yellow, in a raceme 3 or 4 feet in length.—(*Ibid.*, t. 5660.)

ROSEMARY RUSSET APPLE.—This is "one of those fruits, of which there are many, that have never acquired the notoriety which appears to be necessary now-a-days, before anything good is appreciated. What was the origin of this admirable Apple we have never been able to ascertain, neither can we discover when it first became known. The earliest notice of it is by Ronalds, who published a figure and short description of it in 1831, and who had cultivated it for many years previously. As a dessert Apple it is one of the very best. Its size, form, and colour, strongly recommend it, and it only requires to be known to find a place in all good gardens where only the best fruits are grown. The following description from the 'British Pomology,' will convey all the information we possess respecting it:—

"Fruit below medium size, ovate, broadest at the base and narrowing obtusely towards the apex, a good deal of the shape of a Scarlet Nonpareil. Skin yellow, tinged with green on the shaded side; but flushed with faint red on the side exposed to the sun, and covered with thin pale brown russet, particularly the eye and the stalk. Eye small and generally closed, woody, with erect segments, set in a narrow, round, and puckered basin. Stalk very long, inserted in a round and wide cavity. Flesh yellowish, crisp, tender, very juicy, brisk, and sugary, and charged with a peculiarly rich and highly aromatic flavour.

"A most delicious and valuable dessert Apple of the very first quality; it is in use from December till February."—(*Florist and Pomologist*, vi., 165.)

APRICOT CULTURE.

(Continued from page 95.)

NOTWITHSTANDING the hardness of the foliage of the Apricot, its blossoms, from their early production, are not always safe from frost, being occasionally injured by it. A few degrees of frost may not do any harm, as I have seen the bloom uninjured when covered with snow and exposed to a temperature 8° below freezing; likewise, when the thermometer has fallen as low as 20°, or 12° below freezing-point, the blossoms if dry have escaped; but in these cases the frost was of brief continuance, and to this circumstance may be attributed the safety of the blossoms, for when there has been a less amount of cold, but of longer continuance, they have generally perished. The blossoms

if they are not blackened do not set; and as to those not expanded, they were all destroyed with me in 1866—that is, all those showing the colour of the corolla.

It has been questioned whether the Apricot blossom is not proof against frost so long as it is dry. That it is not so susceptible of injury when the air is dry as when it is wet is only what may be expected, but it does not follow that a dry atmosphere is all we require to protect the blossoms when the thermometer indicates several degrees below freezing. No fruit tree blossom is proof against severe cold, and especially a continuance of cold damp weather, and however unnecessary some may think it to protect Apricot blossoms, I am of quite the contrary opinion. My experience is that a slight frost will not prove injurious, but a continuance of cold and wet does mischief that might have been prevented had due regard been paid to the protection of the blossoms; at the same time little good, and even harm, results from covering the trees during mild weather, for it only renders the blossoms more liable to injury from frost in those periods of cold which very often follow warm weather. Protection is not required in warm weather, for the trees will be sufficiently excited without it, and no protection ought to be afforded unless one is prepared to give an additional amount of it when the cold is severe.

It may have been observed that the blossoms and fruit of trees against buildings are often uninjured by a severe frost, whilst those of trees upon garden walls are so damaged that the crop is poor. Now, in trees against a building the dew is prevented falling on the blossoms to the same extent as in the case of a garden wall, for the roof of the building will overhang the tree, and the amount of condensed moisture falling on it will be considerably lessened. Insignificant as this may seem, I know that a similar protection is often sufficient to guard the blossom from injury. A wide coping-board is excellent to fix along the wall over the trees. One of 14 inches wide is ample for a wall 12 feet or more in height, and one 11 inches wide for a wall of 10 feet or under, and in most cases such a coping-board is all that is necessary.

In severe weather and in cold situations canvas or nets will be requisite in addition to the coping-boards. Canvas is, undoubtedly, the best covering in a night of severe frost; but if continued over the trees by day it does more harm than good. There are times when the protection is required as much by day as night, and then canvas coverings are not good, as the trees are kept in the dark, and are deprived of air, without which in abundance the Apricot does not thrive. The best means of protection with which I am acquainted are woollen nets with a quarter-of-an-inch mesh. These, from their openness, do not prevent the air from reaching the trees, but are sufficient to check the deposition of dew, which very often is converted into ice by morning. The netting should be made of sufficient width, by sewing several breadths together, to reach from the top of the wall, immediately under the coping, to within a foot of the ground. It should be securely fastened at top under the coping to a strip of wood, and, to prevent its brushing against the blossoms, poles should be set with one end in the ground, and at 18 inches from the wall, and the other end resting against the latter immediately under the coping. The poles should be 3 feet apart, and the netting secured to them, at 1 foot from the ground, with string fastened to the netting and to hooks or nails in the poles. The netting may, instead, be made to move up and down by means of rollers in the same manner as shadings for greenhouses, or it may be secured at top by rings to an iron rod, so as to draw back like curtains. It may also, when not required, be rolled up by hand and laid upon the top of the wall in readiness for use.

Various other materials are also used for protection, as frigidomats, mats, branches of evergreens, and occasionally straw and hay ropes. I have seen straw placed amongst the branches, and it is not a bad protection if care is taken not to cover up the blossoms. Branches of evergreens are also good if stuck in behind the main branches and allowed to hang over the blossoms. These simple means of protection have but two objections—they are not nearly so neat as netting or canvas, and they are more troublesome to place and remove.

It has been said that it is more necessary to employ covering to retard than to protect the blossoms. This remark I am certain was never meant to apply to the Apricot, for I find a net or canvas kept over the trees after the weather has become so warm as to cause the buds of the trees to swell, has no effect in preventing their expanding, as I have proved by keeping the netting over some trees by day and not over others. I find it very desirable to defer affording protection as long as

possible, and when it is used to employ as little as the safety of the blossoms warrants. When the bloom-buds are so far expanded as to show white boldly, then the protection ought to be applied whenever there is a likelihood of a frosty night. The protection should remain over the trees by day when the weather is cold, wet, and frosty; but on fine days it should be removed by 8 A.M., and should not be replaced at night unless there is a prospect of frost, and not then sooner than half-past five o'clock.

The protection should be continued until the trees are plentifully furnished with leaves, for the young fruit is as susceptible of injury from frost as the blossoms, if not more so. The fruit is not safe until spring frosts are over, and though it would be most injurious to employ protection when the nights are not frosty, neglecting to afford it when they are so may result in the fruit falling when of the size of Beans or larger. The protecting material should, therefore, be in readiness in case of an emergency. An hour's extra attention on a cold night may save a good crop of fruit from destruction.

Thinning the fruit is an important operation, as upon it depend the size and quality of the produce, and the present and after well-being of the tree. It should be done whilst the fruit is young, and of the size of Gooseberries for bottling. I have seen them left until of the size of Walnuts, and then pulled off in great quantities, but this is a great waste of the vigour of the tree, and robs the fruit left. When the young Apricots set very thickly, it is well to go over them when about the size of horse beans, and relieve the tree of some of its superabundant fruit. The smallest and worst-shaped should be first removed, and then the worst in shape and size of those left, always removing those fruits that are likely from their position to become squeezed into an ill-shape from being placed between the wall and the branches, or in some of the angles of the latter. No greater mistake can be made than not thinning the fruit, as the operation has an important effect on the size and quality of the produce; but it should be done early, so that the fruit left may have the full benefit of the vigour of the tree. If fine Apricots are wanted they must be thinned in time, and the fruit taken off is far better for tarts whilst young and tender than when there is a large stone in them.

Thinning should not only be done early but judiciously. Weak trees and weak branches ought not to be allowed to bring to perfection so many fruit as those that are vigorous. One fruit to every half foot of surface is quite sufficient to leave upon a vigorous tree, but the amount of the thinnings should also be regulated by the size of the fruit. Large kinds should be allowed more space than those that are small or medium-sized. Vigorous branches may be allowed to carry more fruit than those which are weak, as the extra cropping of the vigorous branches will prevent their becoming too strong. The trees should be gone over twice or thrice, removing a quantity each time, as nothing is so detrimental to the health of a tree as the removal all at once of bushels of fruit, which were thinning done early and at twice might all be put in a peck measure.—G. ABBEY.

(To be continued.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

THE Celery and the chief crops of Endive being planted, the cultivation of the ground between growing winter crops should proceed in fair weather. *Cabbages*, cut all hard or bursting heads in order to secure a good crop of early sprouts. *Kidney Beans*, let the late crops be well earthed up to protect them against storms, and top or pinch all inclined to assume a running character. In gathering *Kidney Beans*, good cultivators pick the old with the young whether of use or not, at all gatherings. It is astonishing how a few large or ripening pods will exhaust the plant and hinder a succession. *Onions*, the crops of which the tops were bent down a fortnight since should be removed forthwith to a gravel walk, and the ground where they have been growing manured well and planted with late Coleworts, which will be very useful. *Shallots* should be taken indoors directly; these require a warm and dry room. Suspended in a Cabbage-net in a kitchen they may be kept quite sound for a long time.

FRUIT GARDEN.

This is a good time to plant the Hautbois Strawberry about 6 or 8 inches apart in beds. Those planted earlier are liable to blossom in the autumn. Let all runners be trimmed away

from the Alpines, and place slates under them. Crevices formed between the soil and walls are the favourite lodgments of numerous insects, therefore at this season the soil near walls should be frequently disturbed. A shallow trench may be taken out all along, and as this is being proceeded with the soil adhering to the bricks should be removed with a hard broom. The portion of wall thus exposed should then be sprinkled with gas water, or with lime water if the other cannot be readily obtained. Lime water should be applied the instant it is made. Remove all superfluous shoots from wall trees, and expose the fruit of Peaches and Nectarines; but this must not be done by cutting off the foliage. If the latter is in any case overcrowded, the fault is owing to the laying in of the shoots, and the remedy must consist in their proper regulation. Place dry Bean-stalks, cut in lengths of about 6 inches, among the branches, and by this means most of the earwigs may be caught before the Peaches become ripe. The soft, pithy lining of the Bean-stalk is decidedly preferred by these insects to the finest-polished tubes.

FLOWER GARDEN.

Those who are fond of early annuals, whether in pots or in the flower-border, should sow soon. Stocks and Mignonette should be sown forthwith. The latter may be sown on a warm border and transplanted into well-drained pots, treating it with much care for a week afterwards. The Moss and Provence Roses for forcing should now be all turned round, if plunged, in order to break the roots through the bottom of the pots; at the same time let all the gross shoots of suckers be cut away. The filling of blanks, staking and tying up, mowing, cleaning, and rolling will, of course, go on as usual. Look over rock plants, pruning back any that are over-growing choice kinds, in order to give them time to break again before winter. Plant in borders single Wallflowers and Mule Pinks. Keep such plants cut back as have a tendency to over-grow Box or other edgings. Many of the Carnations and Picotees that were layered early will now be fit to take off; it is better to detach them from the parent plant as soon as rooted. Prick out seedling Pansies, and plant out the first-struck cuttings for next year's bloom. Auriculas may now be repotted. All decayed leaves should be removed; but this must be done carefully, or more injury will be sustained by the plant than many people imagine. In potting, should the plant appear at all unhealthy, carefully remove the soil without breaking the ball, and examine the tap-root. Should this be decayed or cankered (which is sometimes the case), it must be cut completely away. Avoid all complicated stimulating composts, for however fine the plants may grow, the health of the stock will be jeopardised. Well-rotted leaves with turfy loam will form a good compost for wintering the plants in. Many bulbs of Tulips, from the serious check they experienced last blooming season, and which reduced in numberless instances their bulk one-half, will require to be moved from the situation they held in the best bed, and their places to be filled from the reserve beds. Pay strict attention to the soil for the ensuing season, turning it over occasionally in order to sweeten it. Pansies will now strike very freely, and when the weather is suitable plant out seedlings in beds of richly-prepared compost. Examine Ranunculus roots, being careful that they do not contract damp, and pay strict attention to Dahlias, which now require much care. Young shoots may be struck in brisk heat, and the regular routine of tying, disbudding, &c., must be persevered in, not forgetting determined hostility to earwigs and all destructive insects.

GREENHOUSE AND CONSERVATORY.

Where conservatory borders or beds exist, see that they are duly watered. Examine the plants individually, as their wants will be various. Arrangements must be made forthwith for housing tender plants. There is in many cases no necessity to bring them all in at once; let it be done in a progressive way, according to their wants. A few of the more showy annuals, such as the Collineias, Clarkias, Leptosiphons, Platystemons, Erysimums, Iberis, Lasthenias, Nolanas, Calandrinias, &c., may be sown now in pots and kept in cold frames through the winter. They will serve to decorate the shelves of the mixed greenhouse early in spring, as well as to enliven the early flower-beds and borders. A good turfy loam rather old will be better than rich composts, the object being to obtain a stiff and healthy plant capable of enduring a hard winter. There will also be more colour in proportion to the amount of foliage—a most important matter in the cultivation of annuals. Plants that are required to blossom late in autumn and winter should be repotted and their growth advanced. Chinese Prim-

roses and Chinese Chrysanthemums are of this class. The latter should be stopped and tied out, so that fine bushes may be produced. These are of sterling value in the greenhouse and conservatory until almost winter, and nothing is so likely to bring them into disrepute as badly cultivated specimens. Plants for next winter's forcing should now be seen to. Pinks, Pelargoniums, and similar plants require to be well established before forcing; the roots should quite fill the pots.

STOVE.

It is advisable to expose the plants to sunshine, in order that the shoots may be ripened before the winter. More air should also be admitted to these plants, as their preservation in a perfect state depends in a great measure upon the thorough maturation of the young wood. It is a great error to keep plants that are required to produce a profusion of bloom during the following spring and summer actively at work late in the autumn. Summer is the season when rapid development should be promoted, and autumn the period when the young wood should be completely hardened and ripened preparatory to the approach of winter.

PITS AND FRAMES.

Some of the first-struck cuttings will now be fit for potting off; place them in a pit or frame, shade and keep them close until they become established in their pots, when they should be set out to harden previous to being stored for the winter. Continue to put in cuttings, more particularly of the best kinds of bedding Pelargoniums, which ought to be struck as soon as possible. Verbena cuttings will strike freely in pans of wet sand, even if exposed to bright sunshine in an open situation, provided the sand be kept wet. Cuttings of Maurandias, Lophospermums, Salvias, Lobelias, Anagallis, Nierembergia, and all others that are considered most suitable to increase the general beauty of the lawn, flower-beds, and borders next season should now be put in.—W. KEANE.

DOINGS OF THE LAST WEEK.

SELDOM have we witnessed a better illustration of the changeability of the weather in our climate than last week. Its beginning was marked by very fine weather, which gave a brighter hue to our corn fields, caused the Turnips to push on rapidly, though before they were showing signs of that languor which in dull hazy weather precedes the mildew, and everything in the gardens seemed rejoicing in the sunshine. The heat terminated in something like a high tropical temperature on Wednesday, and became almost unendurable, except when a slight breeze was produced about us by rather sharp exercise at work. Many plants even showed distress by their drooping leaves, the roots being unable to supply quickly enough the great demands made on the foliage by such a rapid evaporation. This would have been more apparent still, but for the bright days that preceded this almost unexampled Wednesday, when even at 9 p.m. a shaded thermometer marked 80°.

The amount of moisture in the shape of vapour raised from plants and the surface of the ground must have been immense, for even flower-beds that had been cleaned, and where a spot of earth was visible, though surface-stirred a few days previously, began to crack and show open fissures in every direction where not shaded by plants, and in the kitchen garden this cracking was going on wherever young plants had been turned out lately, so as to leave a part of the ground fully exposed to the sun's influence. In the first part of the evening, knowing that there was plenty of moisture in the soil, and that the plants did not want watering at the roots, we planned how best on the following day to go over the most of our ground, by surface-stirring, so as to keep moisture in and heat out, and thus so far enable the plants to bear the great demands made upon their foliage by the high temperature; but by 9 o'clock p.m. the barometer began to fall, huge snails began to show themselves—a pretty sure sign that drought would not long continue—a few clouds began to appear, and there were not wanting the feelings that generally precede violent electrical action, and by 3 a.m. the thunder rolled, and the rain descended, and since then to the writing of this there has been a great, and so far as our feelings are concerned, a pleasant fall in the temperature. The rains, even, will as yet do no harm, if we have plenty of sunshine to perfect the corn and permit of its being garnered in good condition. We have heard no complaints except from a few, who, having made arrangements to have a regular watering-day on the Thursday, found all the needful watering done to their hands. Such sudden changes

show the folly of deciding long beforehand what we should do in our gardens and fields. The circumstances of every-day require to be considered in arranging to the best advantage the labours of that day.

KITCHEN GARDEN.

The heavy rains saved us the trouble of watering, and enabled us to turn our attention to planting all open spaces, and sowing more Lettuces, Turnips, and Radishes, as the Turnips, though small, will be useful and sweeter than those sown earlier. We will as soon as possible pull up a piece of Peas and Beans, and plant Celery for the last time—fine strong plants which will come in useful in spring. The Peas being a favourite kind we were anxious to save some good ripe seed; but we must be content with a portion, as, despite all our trapping and tarring, we find the rats climb the sticks, cut off the best pods, and collect them in heaps to be devoured at leisure. In this respect birds and mice are a trifle to the rats. The first rat we trap, but with little harm done, we will tar and feather, to give an example to his brethren, and that will release us for a time from the visits of the community to which he belongs. The tarring would be more effectual but for the simple fact that the rats come from different directions, if not from entirely distinct communities; and as far as observation has enabled us to judge, we should come to the conclusion that between these communities there is as little friendship or mutual interest and intelligence existing as among warlike savage tribes of mankind, each of which looks on a neighbour tribe less as a friend than an enemy.

Several times we have seen an emigrating army of rats going off to found a new settlement. Only once have we seen a meeting of such emigrants, but in fact they did not meet. Long ago, on a bright moonlight night, we were crossing a narrow foot-bridge over a river, and noticed a long moving line coming towards us. To mount the stone ledge of the bridge was the work of a moment; but we had not been long there when the moving line stood still, and on looking back we saw a similar moving line coming from the opposite direction. Both sides stood still when about 6 yards from each other. There was the erecting of the back, a sort of hissing and screeching defiance, and then each side—as far as we could see about twenty-four rats—thinking discretion the better part of valour, turned, and went back the road they came. It is just possible they might have scented the presence of a common enemy. The scene of the bridge led us to think, however, that rats, like other wild and even tame animals, do not like others even of the same family to intrude upon their peculiar territory; and thus it is, that though by tarring a rat, and then giving him his liberty, you may send consternation and strong motives for change of quarters into that community to which the rat belonged, you will not be freed from the visits from another community, who have received no such broad hints to be on the out-look. Be this as it may, most likely we shall have visits of rats until some of the best grain is stacked. When all corn-stacks shall be built on platforms, and rats prevented ascending to them, then we may expect that gardens will suffer more than they now do, unless the numbers of the rats are vastly thinned, and less encouragement given them, not designedly but adventitiously, to multiply.

Walks have needed much cleaning this season to keep them bright. We shall take the first opportunity, with shears, to nip off all the twigs on the top and the sides of the Box-edging that extend beyond the main bulk, and then the edgings will be regular and green all the winter. Little will need to be done after the clipping they had in spring, as they were becoming too large. Gone over now they will need but little attention in spring to keep them in good order. Many things in the way of tiles and slates answer better than Box for edgings, because they harbour no vermin, but nothing is so pleasant to the eye as a neat Box-edging. Our walks are rather smooth to permit of salting for weeds, and even if they were salted it would be, as it always is, advisable to keep the salt from 6 to 12 inches from the Box. We lately saw some fine walks in a pleasure ground greatly marred, as respects effect, from a salting followed by rains, that washed over the edgings and destroyed very irregularly the verdure at the sides.

FRUIT DEPARTMENT.

Many Apples have fallen prematurely, but in most cases it is just an effort of Nature to do what we should have done to help her by thinning out the super-abundant crop. We also find that Pears on low bushes and pyramids are considerably marked by the frequent hailstorms they have encountered, and

could we find time we should thin many of them out, which would enable those sound and unspotted to swell more freely. We have finished our protecting by netting the most of the Morello Cherries we mean to hang any time, gathering the rest, as the birds had begun on them, sour as they were. We find we shall not be able to keep late Gooseberries, as the Warrington, so long as usual this season, which is a little singular, as in most things we find the season is fully a fortnight later than the generality of years. Small birds have penetrated through our netting, but after all have had little more than their share of the very heavy crops of Gooseberries. To keep small birds out would require half-inch-mesh netting. Many pass easily through one-inch mesh, though how, without becoming entangled, we can scarcely make out.

Wasps have annoyed us little this season; but we scarcely had a visit until September last year, and then all at once they came in myriads. They showed rather strongly in May, but we have seen little of them since. A paragraph has been going the round of the papers that, provided the hole or holes to a wasp's nest be closed up, those outside when they come to find an entrance will not sting you, though any who find their way out will be sure to do so. Our own experience with swollen cheeks and head as a boy would point to the contrary—that the wasp never forgets the power in its sting; but we would be glad to know the experience of others in this respect.

In the orchard-house to make sure, we spread a thin sprinkling of guano near the walls and on the borders before watering, to drive away any ants that might be present, and stuck bean-stalks among the branches to entice earwigs and woodlice. We have had a few fine Peaches spoiled as to their appearance by the attacks of the latter, and it is always a great annoyance to gather a fine fruit and then find a hole in it.

Errors will happen both in writing and printing. In the first paragraph on the Fruit Garden, page 123, the beginning of a sentence, reads thus—"Most likely these shoots will push again from near the fruit, &c." Change "fruit" into "point," and all will be clear. When these summer shoots are stopped, when, say, 1 foot in length or less, the earlier they are stopped the more likely will they be to break again, but in such a case the fresh growth will come from near the point of the shoot stopped, and the buds near the base will not start; but the nipping out the point at first of such a shoot will have the tendency to make the small buds at the base fruit-buds instead of wood-buds. We have now removed the most of the shoots that we had left as outlets to prevent the starting of what we wish to be fruit-buds.

ORNAMENTAL DEPARTMENT.

The display in the flower garden has, as respects Pelargoniums, been later than usual. The fine weather last week made a great difference in their appearance, as all the colours seemed so much brighter after basking in successive days' sun. The heavy rains did much less harm to their appearance than we expected. In the partial outbursts of sunshine they looked with something of their accustomed brilliancy on Saturday. This was in a great measure owing to the simple fact, that before the heavy rains of Thursday the most of the beds had been gone over, edgings cut, any weed removed, blotted leaves, decayed petals, and trusses taken away, and all made rather as they ought always to be; and that is, with the conflicting demands on our attention, what we seldom can say. In anticipation of the hot weather continuing, Calceolarias had received a little rough mulching, and they have been quite up to the mark all the season, as plenty of moisture and a fair amount of sunshine just suit them.

What, however, we wish to impress on those who consult these pages for instruction is this simple fact, that when a bed of flowers, be it what it may, but especially if the several shades of Pelargoniums of the varied-coloured scarlet type form a portion, is kept well trimmed as it ought to be, removing every coloured leaf, every leaf of extraordinary dimensions, every faded petal as well as truss, then variations of weather will have less effect on the brilliancy of the bed. We say advisedly above, as respects Pelargoniums, faded flowers as well as trusses, because in many kinds of these fine bedding Pelargoniums, a truss will often have two or three scores of flowers. The central flowers will generally expand first, and, of course, will decay first, and these may be several times nipped out with the point of a knife, leaving those in fall bloom to stand, and the unopened flowers to succeed them, and only removing the truss when few unopened flowers are left. Now, if this is done, the difference in the result in changeable showery

weather, as contrasted with the result when no such nipping and cleaning is given, is very great. In the first case the rains rather wash and refresh instead of greatly injuring, in the latter case every shower washes the colouring of the decayed flowers over the fresh ones remaining, not only destroying their brilliancy, but, as it were, giving them a poisoning as well, and these faded petals falling on and resting on the foliage destroy its beauty and damp it into blotches or holes.

It is of no use disguising the fact, that fine flower-beds out of doors demand more unremitting care than in the great majority of cases can be afforded them—a fact which should lead not to less care being given, but to a lessened number to care for. Our amateur readers may rest assured, that the better kept their beds are, the less will these suffer in brilliancy from changes in the weather. If all faded flowers are not removed, then the beds will suffer greatly in their appearance from every downpour of any duration. Another point should be kept in view, especially in very rainy districts, and that is, to have flowers that the rains affect the least. One of the most successful and polished young nurserymen we ever met, was at first quite surprised at this consideration being brought to bear on a new bedding Pelargonium. He had grown them chiefly in sheltered positions. But this simple fact constitutes a great recommendation to many of the smaller-petalled Nosegay Pelargoniums. The wind and the rains pass through them without hurting them, which they cannot do in the case of the larger-petalled fine-formed kinds. So, too, with Calceolarias. Those with small flowers and the openings to the pocket or little reticule small and sealed-up, will stand torrents of rain, when those with larger flowers and larger openings to let the moisture into the bag, would be sure to fall off, even by the weight of moisture added. This gives a reason why many fine large-flowered Calceolarias are quite unfitted for the flower-bed, and we must content ourselves with flowers of less size because they stand so much better.

But for the necessity of having the beds, lawn, and walks in unusually good order, we would have been busy propagating, and trust that we shall have done much in that way before this is printed. Before this time all kinds of Pelargoniums would have struck freely in the open border, as the mere flagging of the foliage in such succulent plants is of no importance; but after the middle or the third week in August it is as well to insert the cuttings in pots or moveable boxes at once, so as to be easily moved, without fresh potting, under shelter when cold nights come. At present the chief work will consist to putting in Heliotropes, Verbenas, Pentstemons, Gazanias, Nierembergias, Petunias, &c., using well-drained pots and sandy soil. Placed under hand-glasses or sash-lights in a cold frame or pit, kept close during the day, and shaded a little if necessary, with a little air at night, they will strike freely, and be much healthier afterwards than if they had received any bottom or other artificial heat. Where the *Centaurea candidissima* is looked upon as a main feature, the cuttings should be put in during the third week of August if possible, and have time to strike in a cold pit, as they will not be hurried. After August they strike badly. July, and March, and April are the best months for striking this white-leaved plant. Sandy soil will do very well, and if there are plenty of thumb or very small 72 or 60-pots, it is better to put only one cutting in a pot, as, if several are put in a pot, the very tender roots are sure to be broken in the process of disentangling and reshifting.—R. F.

COVENT GARDEN MARKET.—AUGUST 21.

THE demand being now so much less than in previous weeks, our market quotations are only nominal. We have still large importations of Continental fruit, and heavy arrivals of Potatoes coastwise and by rail, generally free from blight.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples 1 sieve	1	0 to 1 6	Melons..... each	3	0 to 5 0
Apricots doz	3	0 4 0	Nectarines doz.	4	0 8 0
Cherries lb.	0	0 0 0	Oranges 100	8	0 14 0
Chestnuts bush.	0	0 0 0	Peaches doz.	6	0 10 0
Currants..... ½ sieve	3	6 5 0	Pears (dessert) .. doz.	2	0 3 0
Black do.	5	0 6 0	Pine Apples lb.	4	0 0 0
Figs doz.	2	0 3 0	Plums ½ sieve	2	6 5 0
Filberts.....lb.	1	0 0 0	Quinces doz.	0	0 0 0
Cobs..... lb.	0	0 0 0	Raspberries.....lb.	0	9 1 0
Gooseberries.. quart	0	4 0 6	Strawberries..... lb.	0	0 0 0
Grapes, Hothouse..lb.	2	0 4 0	Walnuts..... bush.	10	0 20 0
Lemons..... 100	8	0 12 0	Green.... per 100	1	6 2 0

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes each	0	3 to 0 6	Leeks bunch	0	3 to 0 0
Asparagus ... bundle	0	0 0 0	Lettuce per score	1	0 1 6
Beans, Kidney, ½ sieve	2	0 3 6	Mushrooms pottle	2	0 3 0
Scarlet Run, ½ sieve	3	0 3 6	Mustd. & Cress, punnet	0	2 0 0
Beet, Red doz.	2	0 3 0	Onions per doz. behs.	5	0 0 0
Broccoli bundle	2	0 3 0	Parsley.....per sieve	3	0 4 0
Brns. Sprouts ½ sieve	0	0 0 0	Parsnips doz.	0	9 1 0
Cabbage doz.	1	0 1 6	Pears..... per quart	0	6 1 0
Capsicums 100	2	0 3 0	Potatoes bushel	2	0 4 0
Carrots..... bunch	0	6 0 8	Kidney do.	3	0 4 0
Canflower doz.	2	0 4 0	Radishes doz. bunches	0	9 1 0
Celery bundle	1	0 2 0	Rhubarb bundle	0	0 0 0
Cucumbers..... each	0	4 0 8	Savoy doz.	0	0 0 0
pickling doz.	2	0 0 0	Sea-kale basket	0	0 0 0
Endive doz.	2	0 0 0	Shallots lb.	0	8 0 0
Fennel bunch	0	8 0 0	Spinach bushel	2	0 3 0
Garlic lb.	0	8 1 0	Tomatoes.... per doz.	2	0 3 0
Herbs bunch	0	3 0 0	Turnips bunch	0	6 0 0
Horseradish .. bundle	2	6 4 0	Vegetable Marrows,dz.	1	0 2 0

TRADE CATALOGUES RECEIVED.

Sutton & Sons, Reading.—*Catalogue of Bulbous Roots, Plants, Seeds, &c.*

W. Cutbush & Son, Highgate, London, N.—*General Descriptive Catalogue of Store and Greenhouse Plants, Fruit Trees, &c.*—*Bulb Catalogue for 1867.*

B. S. Williams, Victoria and Paradise Nurseries, Upper Holloway, London, N.—*General Bulb and Fruit Tree Catalogue.*

Smith & Simons, 1, Buchanan Street, Glasgow.—*Dutch Root List.*

TO CORRESPONDENTS.

“ We request that no one will write privately to the departmental writers of the “Journal of Horticulture, Cottage Gardener, and Country Gentleman.” By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

SOIL FOR VINE BORDER (*Subscriber*).—The soil will do admirably with the addition of the ingredients you name.

RUST ON BEANS (*J. L. D.*).—Your Beans are affected with rust, a fungus called by botanists *Uredo fabae*.

SPOT ON GRAPES (*Amateur Grape-grower, and Ten-years Subscriber*).—The cause of the spot is no doubt too much humidity at the roots with a deficiency of sunlight to enable the plant to digest the excess of food it has taken up. The advice, therefore, which the two Grape-growers gave you was bad. Instead of shading your Vines during the recent hot weather, you ought to have given all the light and air you could. This is just such a season as will produce spot, from the excessive amount of moisture in the outside border, and the great deficiency of sunlight; the consequence is, we never knew the disease so prevalent.

GRAPES SHRIVELLED (*G. H. L.*).—In your case this evil has evidently resulted from the same causes as those referred to in the preceding answer.

CLUB IN CABBAGES (*Capt. B., and Purcroft*).—Clubbing is very frequent in old garden ground. Frequently change the positions of the crops; dig, trench, and expose the soil well to frost; lime it, or point in a dressing of soot. As regards the plants, transplant them frequently, rejecting all that exhibit protuberances on the roots. A little wood ashes or soot dropped into the holes at planting may also prove beneficial as a preventive; but when once a plant is fairly effected, the best thing to do is to burn it; even if the protuberance is removed the plant rarely comes to much. Club or anbury is most frequent in dry seasons.

COMPOST FOR TREMENDRA (*TETRAHECA*) *VERTICILLATA* (*Dolores*).—Two-thirds sandy fibrous peat, one-third light turfy loam, with a free admixture of silver sand will grow this plant well, good drainage being provided. The soil should be kept moist, but extremes of wet and dryness are to be avoided. The plant does not require excessive waterings.

EVERGREENS FOR VASES (*Idem*).—You may render your vases very ornamental by planting in them the different varieties of green and variegated Hollies. They are of very compact growth, and will endure any amount of cutting to give them the shape of pyramids or bushes.

CLOTH OF GOLD ROSE NOT FLOWERING (*Idem*).—The best way to induce this Rose to bloom, is to plant it against a wall with a south-west aspect, in good, rich, rather strong loam. In training against the wall, keep the shoots moderately thin, and prune very little, merely cutting out the old wood, and removing the points of the very long shoots.

QUICK-GROWING SHRUB FOR A HEDGE (*G. B.*).—The quickest-growing plant for a hedge is the Evergreen Privet; but it does not grow very strong, and is best planted alternately with Quicks.

RHODODENDRONS NOT FLOWERING (Agnes).—Your Rhododendrons are spoiled through being kept under glass. They are perfectly hardy, and should have been kept outside, with the pots plunged in an open situation, and well supplied with water when making their growth, and during dry periods. In a greenhouse Rhododendrons, unless they have a very cool and airy position, grow luxuriantly but do not set their buds, a circumstance which is due to the deficiency of light, and their growth not becoming matured. You cannot do anything this season to prevent the plants to flower next year, for their buds, you say, are wood-buds.

AZALEAS AFTER FLOWERING (Idem).—Azaleas after flowering should be reported if they require it, be placed in a house with a gentle heat, and have frequent syringings, and a moist atmosphere, with a moderate amount of air, in order to encourage free growth. Continue them in the house for about six weeks, or until a good growth has been made; then they should have abundance of air, and a situation well exposed to the light. Supply them with plenty of water, and keep them under glass until the buds are set, which you may know by feeling the points of the shoots. Those which have set for bloom will feel as if there were a hard knot in them; but if there are no bloom-buds the points of the shoots will be soft and empty. They may then be placed out of doors; take them in towards the close of September, and place them in a light and airy situation in a greenhouse from which frost is merely excluded, giving plenty of air. It is better to retain the plants under glass after the buds are set, keeping them in a cool, well-ventilated structure.

AZALEA LEAVES BROWNING (F. B.).—The only way to prevent the leaves from browning and falling off is to keep the plants in health. If you will send us particulars we will endeavour to advise.

CHRYSANTHEMUM CUTTINGS (A Subscriber).—Cuttings of Chrysanthemum struck in April flower the same year, and cuttings struck in July will also flower in the same season, if not stopped after that time; but not nearly so finely as those that were struck in spring.

TRANSPLANTING ROSES IN SEPTEMBER (Idem).—Although root-action is more active in September than later in the season, it is not a good time to remove roses, as when then lifted they are liable to suffer, and the wood does not ripen well. The end of October, or the beginning of November, is the best time to plant roses.

PLACING CAMELLIAS AND AZALEAS OUT OF DOORS (Idem).—It is a rule not to turn these plants out of the house until the growths are made, and the buds set, but they do much better kept in a cool, airy house.

PROPAGATING CERASTIUM TOMENTOSUM (J. L.).—It strikes very freely from cuttings. The shoots that come from the base of the plant make the best cuttings. These, taken when from 3 to 4 inches in length, inserted in light, sandy soil, and kept moist and shaded, will soon root, and will be fine plants by the next spring. We simply allow a line or edging to remain through the winter, and in showery weather about the end of March, take up the whole line, pull the plants to pieces, and plant these with a dibble, putting two or three of the tiny wiry shoots together. We leave an inch or two of their tops above ground, and make no distinction between those which have roots and those having none, as all alike make good plants. We insert them about 6 inches apart, and by July we have as good a line as could well be desired. It is quite hardy.

PROPAGATING DOUBLE TOM THUMB TROPEOLIDS (Idem).—The points of the moderately strong shoots should be taken off with a sort of heel when from 3 to 4 inches long, and quite close to the shoot from whence they take their rise. The ends of the cuttings should be pared smooth with a sharp knife, and the leaves removed for two-thirds the length of the cutting. Insert the cuttings to that depth round the sides of six-inch pots, in a compost of equal parts of sandy peat and loam, and silver sand, placing an inch of the last over the surface. Give a gentle watering, and place them in a hotbed of about 70° or 75°, plunging the pots to the

rim. Be careful not to over-water, and keep close, or admit air very moderately. There is no necessity to shade. The sand should not be more than moist. They will strike root freely, and then gradually harden them off, pot off, and winter in an airy greenhouse.

PROPAGATING VIOLA CORNUTA (Idem).—This plant strikes very freely from the side shoots, or runners slipped off either with or without roots, and potted in small pots filled with light soil, and placed in a cold frame. They should then be kept close and shaded for ten days or a fortnight, the soil being maintained in a moist condition, and water being applied overhead in the morning through a fine-rosed watering-pot. When the young plants are growing freely harden them off, and plant out where they are to remain. It is very hardy, and easily increased by division and seeds.

SALVIA PATENS, BUDS AND FLOWERS DROPPING (D. H.).—We can only account for the flowers (never of long continuance individually) dropping by a deficiency of water at the roots, and keeping the plant at a distance from the glass in a conservatory, and in a badly ventilated part. Supply it with plenty of water, and give liquid manure once a week; place it in the lightest, most airy, and coolest situation, and syringe the foliage frequently, but not the flowers. The plant is very liable to be attacked by red spider and thrips when grown under glass.

CORDYLIN INDIVISA DAMPING OFF (H. M. G.).—Cordylines, Draecenas, and Tree Ferns, are liable to die off by the decay of the stem near the surface of the soil. This is the result of potting the plant with the collar sunk to the centre of the pot or tub much deeper than it was before. Watering keeps the collar very wet, and decay sets in from the base of the leaves that were removed. Pulling off the leaves is a very common cause of the stems decaying, and is a practice that should be avoided as much as possible. The decayed leaves should be cut off with a sharp knife instead of being torn off, which can hardly be done without damage to the stem of the plant.

DEFINITION OF GREENHOUSE AND CONSERVATORY, AND OF LOAN (Old Buggleton).—Greenhouse and conservatory are often used synonymously; but the first is intended to convey the idea of a structure principally devoted to plants in pots or boxes; the second, to those for the most part planted out. In both the temperature is suitable for exotic plants not sufficiently hardy to withstand our winters, but not so tender as to require the heat of a stove or intermediate house. The term loan is applied in a very indefinite manner. By loan we should understand the accumulated washings of any soil of an aluminous nature, and when mixed with other soil naturally or artificially, the mixture is then distinguished as chalky, peaty, or turfy loam, &c.

HELICHRYSUM (A. X., a Constant Subscriber).—Gather the flowers when they are just opening; they will then keep for a long time. Evidently you cut them when too far expanded.

NAME OF FRUIT (Thos. Bunyard & Son).—We believe your Pear to be highly-coloured specimens of the Peach Pear.

NAMES OF PLANTS (J. C. S.).—1, Pyrethrum, garden var.; 2, Gentiana asclepiadea; 3, Catananche crerulea. (F. B.).—Franconia souchifolia. (P. C. F.).—1, Hypericum androsæmum; 2, Adiantum capillus-veneris; 3, Pteris serrulata; 4, Artemisia vulgaris; 5, Liatris vulgaris. (J. E.).—Nos. 1-5, all Lastrea Filix-mas. We have searched in vain for such an article as that which you say appeared. (Cris S.).—Prunella vulgaris (Self-head). (A. B.).—Lastrea Filix-mas cristata. (J. E. S.).—1, Polka geraniifolia; 2, Cheilanthes hirta. (D. D.).—1, Lastrea Filix-mas; 2, Lastrea sp.; 3, Polypodium phegopteris; 4, Athyrium Filix-femina. (C. A. M.).—1, Nothochlæna Maranta; 2, Asplenium latifolium; 3, Cheilanthes olera. We could not undertake the labour of naming a whole book of dried Ferns.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending August 20th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 14	29.948	29.736	91	61	66	62	S.	.18	Very fine and hot; cloudless; overcast, thunderstorm and heavy rain; shower; slight rain at night. [rein st night.]
Thurs. 15	30.131	29.887	84	54	67	63	S.	.27	Densely overcast; fine throughout.
Fri. . 16	29.800	29.615	75	54	66	63	W.	.00	Cloudy; partially overcast and fine; cloudy.
Sat. . 17	29.850	29.842	70	54	66	62	S.W.	.00	Overcast; cloudy; very fine at night.
Sun. . 18	30.000	29.986	73	53	65	61	S.	.00	Very fine; exceedingly fine and hot; continuous storm of thnnder, lightning, and heavy rain.
Mon. . 19	30.071	30.014	89	58	65	61	S.	.81	
Tues. . 20	30.073	29.990	81	51	66	62	W.	.03	
Mean	29.982	29.867	79.14	55.00	65.86	62.00	..	1.26	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

FRENCH BREEDS OF POULTRY.

Having imported and disposed of for the National Poultry Company many hundreds of the French varieties of fowls, I think that this experience may be of some interest to your readers. The three breeds are, I consider, very useful introductions to our poultry yards, and I rank them in order of merit—first, Houdan; second, Crève Cœur; and third, La Flèche. The two latter are more especially suited to a genial climate and dry situation. The greatest drawback in this country to Crève Cœur is that they are subject in change of temperature to attacks of cold, approaching to, and not unfrequently ending in, roup. The same, in a certain degree, may be said of the La Flèche; and there is in this variety an un-

accountable mortality amongst the cocks, with great difficulty in keeping them in good health on the same run where the hens are doing well.

It is to the Houdans, which, for commercial purposes I consider stand first, that I purpose more particularly to refer. They are a very hardy race, easily acclimatised, showing great vigour of constitution, and bear almost any confinement; prolific layers of large eggs, which they continue to produce nearly throughout the year. They are very fertile, much more so than the other varieties of French fowls, and equal in this respect to any of our exhibition breeds, consequently there is a large proportion of chickens, which are particularly hardy and easily reared. It is a common saying at the National Poultry Company's establishment, "You cannot kill a Houdan chicken." Being non-sitters it will, of course, be necessary to incubate their eggs by some other breed. Cochins or Brahmas hens accomplish this in the best possible manner. An adult

cock in condition will weigh from 7 lbs. to 9 lbs., the hens about the same, and chickens from four to four and a half months old 5 lbs. and 6 lbs., with a remarkably small proportion of bone and offal.

I am strong in the opinion that in a given breeding stock having proportionate advantages with any other known variety of fowls, a greater weight of flesh and eggs would be produced during a season, and of first-rate quality, from the Houdans. This, I think, may fairly be considered a great acquisition when an increased supply of meat at the least possible cost is absorbing public attention. I do not say that in point of quality our superior strains of Dorkings and Game are surpassed as table fowls; but I hold that a breed possessing the above-mentioned properties in a marked degree is a desideratum. The Houdan is a lively, showy-looking bird, of peculiar characteristics. The comb, the crest, the beard, &c., give it a novel appearance; and the fifth claw I have invariably found to be well developed in the finest specimens, and on a recent visit to the Continent I found this was considered a mark of purity of breed. In selecting them I should look to large frames, short legs, black and white plumage, free from any other colour; comb of cock not large, neat and even in appearance; in the hens very small; crest, beard, whiskers, and fifth toe well developed in both sexes. The beak should be stout, the earlobes small, and the wattles united to the comb.—W. MASSEY.

HOUDANS AT EXHIBITIONS.

"LINDUM," in last week's Journal, wishes to know whether Houdan fowls should have the muffling or beard. I think there can be no doubt about it. "The Standard of Excellence" in exhibition poultry mentions the muffling in the characteristics of the breed. M. Jacques, the author of the "Poulailler," and the greatest acknowledged poultry authority in France, mentions the beard, or *cravat*, as the French call it, and gives the standard size of it in centimètres. I have now before me a small poultry standard, published in the Houdan district, and devoted exclusively to Houdan poultry, in which the beard or *cravat* is insisted upon, and its standard size given in both cock and hen birds. I have myself imported a great number of these fowls, and I never received but one without the beard. I obtained the bird from an inferior dealer, and consigned it at once to the barndoor, not considering it fit either for sale or breeding.

I consider that the extraordinary merits of the Houdans entitle them to the serious consideration of poultry committees in arranging prize lists, and I hope that Birmingham will follow the example set by the Royal Agricultural Society of England at Bury St. Edmunds.—FRANCIS B. HEALD.

AN INDUSTRIOUS HEN.

In February I sat a Game Bantam weighing only 17 ozs. on sixteen eggs, all of which she hatched. I then gave her four others which were a week old. She reared them all, and some of the number have won prizes already. The hen soon commenced to lay, and then to sit a second time; and having for a fortnight tried in vain to prevent her sitting, I again gave her some eggs, thirteen in number, and now she is bringing up thirteen chickens as fine and even in quality as it is possible to imagine. They are about five or six weeks old.—W. F. ENTWISLE.

UTTOXETER POULTRY SHOW.

LUCKILY the weather proved most satisfactory for this Show, although in the previous night, for more than five successive hours, thunder, lightning, and rain prevailed to an extent rarely known in this district. So continuous was the storm, that before one roll of thunder ceased another took up the deafening peal, till most of even the strongest-built habitations shook to their foundations. It was noted by many of the oldest inhabitants of Utoxeter, that a storm so continuous and of equal severity has not been known since that which occurred on the night of the death of George IV. Still, as the morning, and in fact the day throughout, proved fine, the Committee have just reason to congratulate themselves; and the arrangements of those gentlemen were highly satisfactory. The pens were good, large, and well-looking, forming a double tier some 80 or 100 yards long. Although the time of year was not conducive to a very large entry, we have rarely seen in a show of the same extent the classes generally so well represented. Spanish, Dorkings, Cochins, Game, Golden-spangled and Silver-spangled Hamburgs were especially so. Game Bantams were good, as were the Sebrights; and Turkeys, Geese, and

Ducks were not less worthy of praise. In short, it proved an unusually good local Show.

SPANISH.—First, J. Walker, Wolverhampton. Second, J. Mansell, Longton. Highly Commended, T. Rogers, Walsall. Commended, A. O. Worthington, Newton Park.

DORKINGS (Any variety).—First, Lady Bagot, Blithfield Hall. Second, Hon. Mrs. Arkwright, Derby. Chickens.—First, Hon. Mrs. Arkwright. Second, L. Bagot.

COCHIN-CHINA.—First, A. O. Worthington. Second, E. Brongh, Leek. Commended, T. Rogers; Rev. S. C. Hamerton, Warwick.

COCHIN-CHINA (Any variety).—Chickens.—First, A. O. Worthington. Second, G. A. Crews. Highly Commended, W. S. Bagshaw (White).

GAME (Black or Brown-breasted Reds).—First, G. Bagnall, Cheshire. Second, F. S. Bagshaw. Highly Commended, M. Walwyn (Brown-breasted Red).

GAME (Any variety).—Chickens.—First and Second, G. W. Hay, Sandbury.

HAMBURG (Gold or Silver-spangled).—First, F. D. Mort, Stafford. Second, C. E. Boothby, Needwood Forest, Burton-on-Trent (Silver-spangled). Highly Commended, E. Bell, Horninglow, Burton. Chickens.—First, E. Bell. Second, F. D. Mort.

HAMBURG (Gold or Silver-spangled).—First and Second, H. Bagshaw (Golden-spangled). Commended, T. May, Wolverhampton (Golden-spangled); F. Richardson, Bramshall. Chickens.—First, W. Tatton, Leek (Silver). Second, E. Burton, Alton. Highly Commended, T. Blakeman, Tettenhall, Wolverhampton. Commended, H. Bagshaw (Golden).

BRAMA POOTRA.—First, A. O. Worthington. Second, Withheld.

BANTAMS (Black or White).—Prize, Hon. Mrs. Arkwright.

BANTAMS (Any variety).—First, Hon. Mrs. Arkwright (Gold-laced). Second, J. Atkins, jun., Walsall (Game). Commended, J. Atkins, jun. (Game).

DUCKS (Aylesbury).—First, T. Wareing, Sandbury, Derby. Second, G. A. Crews, Etwell, near Derby. Commended, A. O. Worthington.

DUCKS (Rouen).—First, G. Bagnall, Draycott, Cheshire. Second, F. Richardson, Bramshall.

GESE.—First, F. Richardson. Second, Miss Littlewood, Forest Side. Highly Commended, — McConnell, Limercrofts (Toulouse).

TURKEYS.—First and Second, F. Richardson.

GUINEA FOWLS.—Second, M. Walwyn.

EXTRA.—Highly Commended, W. A. Rawlins, Stramshall (Spanish Geese); R. B. Wood (Houdan Fowls, Crève Cœurs). Commended, C. E. Boothby, Burton-on-Trent (White Cochins).

SWEEPSTAKE.—Prize, T. Bladon (Pile Game Cock).

RABBITS.—First and Second, T. Baker, Dresden. Commended, F. Harper, Uttoxeter; T. Baker; W. Willisford, Uttoxeter.

PIGEONS.—*Horsmen* (any colour).—First, H. Yardley. Second, W. Wilkins, Spiceall Street. *Tumblers* (any colour).—First and Second, H. Yardley. Highly Commended, H. Chawner, jun., Hondbill (Almond). Commended, H. Bagshaw. *Carriers* (any colour).—First and Second, H. Yardley.

Edward Hewitt, Esq., of Eden Cottage, Sparkbrook, Birmingham, officiated as the Arbitrator.

HESSLE POULTRY SHOW.

THE second annual Show took place at Hesse, near Hull, when nearly two hundred pens of Poultry and Pigeons were exhibited. The Poultry, as regards quality, was very good, but suffered severely from the intense heat, being exhibited in pens of open wicker work, and without any protection from the burning rays of the sun. We hope next year the Committee will provide better accommodation, otherwise the owners of valuable birds will refrain from sending them. The Rabbits were in a still more pitiable plight, several died through the effects of the heat. Annexed is the prize list:—

SPANISH.—First, G. Holmes, Driffield. Second, H. Hoyle, Hesse. DORKINGS.—First, W. Charter, Driffield. Second, F. Key, Beverley.

COCHIN-CHINA (Buff, Cinnamon, or Partridge).—First, O. A. Young, Driffield. Second, J. Hatfield, Cottingham.

ANY OTHER VARIETY.—First, R. Loft, Woodmansey. Second, W. Charter. GAME (Black-breasted or other Reds).—First, H. M. Julian, Hull. Second, G. Holmes.

ANY OTHER VARIETY.—First, H. M. Julian. Second, G. Holmes.

POLANDS.—First and Second, Mrs. E. Procter.

HAMBURGS (Golden-spangled).—First and Second, G. Holmes.

HAMBURGS (Golden-pencilled).—First, G. Holmes. Second, J. Marshall, Kirksella.

HAMBURGS (Silver-spangled).—First, O. A. Young. Second, G. Holmes.

HAMBURGS (Silver-pencilled).—First and Second, G. Holmes.

GAME BANTAMS.—First, G. Holmes. Second, R. Robson, Wold Carr.

ANY OTHER VARIETY.—First, Mrs. T. Wilde, Hull. Second, O. A. Young.

EXTRA STOCK.—Second, J. Hodgkinson.

SINGLE COCKS.

SPANISH.—Prize, G. Holmes.

DORKINGS.—Prize, G. Holmes.

COCHIN-CHINA (Buff, Cinnamon, or Partridge).—Prize, R. Loft.

ANY OTHER VARIETY.—Prize, W. Charter.

GAME (Black-breasted and other Reds).—Prize, H. M. Julian.

ANY OTHER VARIETY.—Prize, J. Hall, Willerby.

POLANDS.—Prize, Mrs. Procter.

HAMBURGS (Golden-spangled).—Prize, O. A. Young.

HAMBURGS (Golden-pencilled).—Prize, G. Holmes.

HAMBURGS (Silver-spangled).—Prize, G. Holmes.

HAMBURGS (Silver-pencilled).—Prize, G. Holmes.

GAME BANTAM.—Prize, G. Holmes.

ANY OTHER VARIETY.—Prize, Mrs. T. Wilde.

EXTRA STOCK.—Prize, R. Loft.

DUCKS (Aylesbury).—First, H. Lawson, Spring Cottage Farm. Second, O. A. Young.

DUCKS (Rouen).—First, O. A. Young. Second, W. Charter.

DUCKS (Common).—Second, O. A. Young.

PIGEONS.—*Dragons*.—Prize, W. Barrett, Hull. *Croppers*.—First, F. Key.

Second, J. Hatfield. *Carriers*.—First, J. Hatfield. Second, W. Barrett. *Trumpeters*.—First, A. Beaumont, Beverley. Second, J. Campey, Beverley. *Jacobins*.—First, A. Beaumont, Beverley. Second, C. N. Lythe, Cottingham. *Fantails*.—First, F. Key. Second, S. Ellington, Woodmansey. *Tumblers*.—First, Miss F. Easton, Hull. Second, C. W. Lythe. *Barbs*.—First, W. Barrett. Second, T. Statters, Hull. *Nans*.—First, C. W. Lythe. Second, O. A. Young. *Any other variety*.—First, Miss F. Easton. Second, T. Statters.

RABBIT (Fancy).—Prize, W. E. Walker, Hossle. *Lop-Eared*.—First, A. H. Easton. Second, O. A. Young. *Buck*.—Prize, A. H. Easton.

The Judges were Mr. Holmes, Hotham, and Mr. Pickering, Hall.

ALLERTON POULTRY SHOW.

The following are the prizes awarded at the Show held August 10th:—

A Silver Cup for the best pen of poultry.—E. Ackroyd, Gillingham. *SPANISH* (Black).—First, J. Thresh, Bradford. Second, J. J. Denby, Allerton. *CHICKENS*.—First, H. Beldon, Giltstock, Bingley. Second, M. Farrand, Dalton, near Huddersfield.

COCCHIN-CHINA.—First, H. Beldon. Second, C. Sidgwick, Ryddlesden Hall. *CHICKENS*.—First and Second, C. Sidgwick.

HAMBURGERS (Silver-pencilled).—First and Second, H. Beldon. *CHICKENS*.—First, R. Longbottom, Bingley. Second, H. Beldon.

HAMBURGERS (Silver-Pheasant).—First and Second, H. Beldon. *CHICKENS*.—First, J. Robinson. Second, Ashton & Booth.

HAMBURGERS (Golden-pencilled).—First, S. Smith, Northwram, near Halifax. Second, H. Beldon. *CHICKENS*.—First, H. Beldon. Second, J. Preston, West House, Allerton.

HAMBURGERS (Golden Pheasant).—First, S. & R. Ashton, Mottram, Cheshire. Second, H. Beldon. *CHICKENS*.—First, J. Preston. Second, J. Walker, Knarborough.

HAMBURGERS (Black).—First, C. Sidgwick. Second, H. Beldon. *CHICKENS*.—First and Second, C. Sidgwick.

POLANDS.—First and Second, H. Beldon. *CHICKENS*.—First and Second, H. Beldon.

DORRINGS.—First, H. Beldon. Second, Hon. H. W. Fitzwilliam, Wentworth Woodhouse, Rotherham. *CHICKENS*.—First, Hon. H. Fitzwilliam. Second, H. Beldon.

GAME (Red).—First, E. Ackroyd. Second, W. Spencer, Cliffe Cottage, near Haworth. *CHICKENS*.—First, W. Spencer. Second, G. Noble.

GAME (Any variety).—First, W. Fell, Adwalton. Second, E. Ackroyd. *CHICKENS*.—First, H. Jennings. Second, W. Fell.

GAME BANTAMS.—First, W. T. Entwistle, Blenheim Place, Leeds. Second, G. Noble, Dewsbury.

BANTAMS (Any variety).—First and Second, T. Burgess, Brighouse.

ANY OTHER VARIETY.—First, H. Beldon. Second, Hon. H. W. Fitzwilliam.

SINGLE COCKS.—*Game*.—First, J. Settle, Manningham. Second, J. Hodgson, Bowling. *Hamburg*.—First, H. Beldon. Second, H. Jennings, Allerton.

DUCKS (Rouen).—First, E. Leech, Rochdale. Second, C. Sidgwick.

DUCKS (Any variety).—First, E. Leech. Second, M. Farrand, Dalton.

GEES (Any variety).—First, E. Leech. Second, A. Booth, Oaks, Allerton.

PIGEONS.—*Croppers*.—First, J. Hawley, Bingley. Second, T. Burgess, Brighouse. *Tumblers* (Short-faced).—First and Second, J. Hawley. *Ouels*.—First, J. Thompson. Second, A. & B. B. Laycock, Keighley. *Turbits*.—First, J. Thompson. Second, A. Booth. *Fantails*.—Second, J. Hawley.

Barbs.—First, J. Hawley. Second, J. Thompson. *Dragons*.—First, J. Hawley. Second, J. Thompson. *Carriers*.—First, J. Hawley. Second, E. E. M. Roys, Rochdale.

RABBITS (Long-eared).—Prize, R. Binns, Bradford. *Common*.—Second, I. Ingham, Allerton.

BURNLEY POULTRY SHOW.

At the third annual meeting of the Burnley Agricultural Society held on the 15th inst., there was a considerable falling off in the entries of poultry, their number being 88 as against 151 in 1865.

The following is a list of the awards:—

CHICKENS.

GAME (Black and Brown Reds).—First, W. Whewell, Irwell Bank, Radcliffe. Second, W. Roberts, Thorneyholme. Highly Commended, E. H. Woodcock, Thornhill, Wigan.

GAME (Any other variety).—Prize, R. Whittam, Mount P.asant, Marsden (File Game).

SPANISH.—First, J. Newton, Silsden, near Leeds. Second, D. Gellatly, Meigle, N.B. Highly Commended, M. Farrand, Dalton, near Huddersfield.

DORRINGS (Any colour).—First, E. Leech, Rochdale. Second, Hon. H. W. Fitzwilliam, Wentworth Woodhouse, Rotherham.

COCCHINS (Any colour).—First, C. Sidgwick, Keighley. Second, A. Bamford, Middleton. Highly Commended, C. Sidgwick.

HAMBURGERS (Golden-spangled).—First, E. Wood, Burnley. Second, H. Pickles, jun., Earby, Skipton.

HAMBURGERS (Silver-spangled).—First and Second, H. Pickles, jun.

HAMBURGERS (Golden-pencilled).—First, W. Walker, Hurstwood, near Burnley. Second, S. Smith, Northwram, Halifax.

HAMBURGERS (Silver-pencilled).—First, B. Longbottom, Bingley, Yorks. Second, A. Smith, Silsden, Leeds.

BAHMA POOTRAS.—First and Second, H. Lacy, Hebden Bridge.

ANY OTHER VARIETY OF FOWLS NOT NAMED.—First, Col. Stuart Wortley, Grove End Road, London (Crève Cœur). Second, C. Sidgwick.

SINGLE COCKERELS.

GAME (Black and Brown Red).—First, R. Whittam, Marsden. Second, W. Whewell.

GAME (Any other colour).—Prize, R. Whittam.

GAME BANTAM COCK (Any colour).—First, C. W. Brierley, Middleton. Second, J. W. Norris.

GAME BANTAMS (Any age or colour).—First, D. Gellatly. Second, G. Birtwistle, Haslingden. Highly Commended, G. R. Davies, Kautsford.

BANTAMS (Any age or other variety).—First, T. C. Harrison, Beverley Road, Hull. Second, J. W. Norris, Rochdale.

SELLING CLASS (Any age or variety).—First, E. Wood (Golden-spangled Hamburgs). Second, H. Wilkinson, Earby (Black Spanish). Third, T. Briden, Earby (Dorking).

DUCKS (Aylesbury).—First, E. Leech. Second, M. Farrand. Third, Hon. H. W. Fitzwilliam.

DUCKS (Rouen).—First, E. Leech. Second, T. C. Harrison.

GEES (Any colour).—First, T. Briggs, Colcoates, near Clitheroe. Second, T. Houlker, Revidge, Blackburn. Commended, S. H. Stott, Quarry Hill, Rochdale; E. Leech.

TURKEYS (Any variety).—First, T. Houlker. Second, E. Leech.

Mr. T. Dodds, Wakefield; and Mr. T. Challoner, Chesterfield, officiated as Judges.

ESTON AND NORMANBY PIGEON AND CANARY SHOW.

This was held on the 13th inst., in connection with a horticultural exhibition, in the grounds of Normanby Park, kindly lent for the occasion by the Rev. W. W. Jackson. The following are the Judges' awards:—

CANARIES, &c.

BELGIAN (Clear Yellow).—First, T. Robinson, Middlesbrough. Second, W. Fawcett, Eston Mines.

BELGIAN (Buff).—First, C. Burton, York. Second, R. Hawman, Middlesbrough.

BELGIAN (Variegated).—First, W. Bulmer, Stockton. Second, J. Thornton, Middlesbrough.

GOLDFINCH MULE, NEAREST CANARY.—First, G. Fawcett, California. Second, J. Driver, Eston Bank.

CRESTED (Yellow).—First, C. Burton. Second, T. Robinson.

CRESTED (Buff).—Prize, T. Robinson.

DEN (Cinnamon).—First, T. Robinson. Second, C. Burton.

DUN (Buff).—First, J. Sawkill, Stokesley. Second, T. Whitelock, Stokesley.

DEN (Variegated).—First, T. Robinson. Second, R. Hawman.

YELLOW (Common).—First, J. Wood, Guisbrough. Second, G. Meynell, Pinchingthorpe.

BUFF (Common).—First, C. Burton. Second, W. Snowdon, Stokesley.

VARIEGATED (Common).—First, T. Whitelock. Second, J. Taylor, Middlesbrough.

GOLDFINCH (Moulded).—First, W. Suggett, Stokesley. Second, G. Cooper, Middlesbrough.

BROWN LINNET (Moulded).—First, R. Hawman. Second, J. Clarke, South Eston.

BLACKBIRD.—Prize, H. Rogers, Lackenby.

TURKISH.—First, J. Sawkill. Second, H. Barnister, Middlesbrough.

CAVE OF TWELVE BIRDS (Variety and Plumage).—Prize, J. Sawkill.

CAVE OF SIX BIRDS.—Prize, G. Fawcett.

CANARY (Common Green).—First, W. Smith, Normanby. Second, J. Sawkill.

PIGEONS.

CARRIERS.—First, H. Yardley, Birmingham. Second, J. Thackray, York.

FANTAILS.—First, J. Thackray. Second, H. Yardley.

TURBITS.—First, J. Thackray. Second, H. Yardley.

TUMBLERS (Short-faced).—First, J. Thackray. Second, H. Yardley.

JACOBINS.—First, W. Bulmer, Stockton. Second, H. Yardley.

BARBS.—First and Second, J. Thackray.

OVELS.—First, J. Thackray. Second, H. Yardley.

TRUMPETERS.—Prize, T. C. Taylor, Middlesbrough.

ANY VARIETY.—First, J. Thackray. Second, H. Yardley.

POUTERS.—First, E. E. M. Roys, Rochdale. Second, J. Thackray.

NUNS.—First, J. Thackray. Second, A. Donaldson, Lackenby.

MAGPIES.—First, J. Thackray. Second, E. E. M. Roys.

TUMBLERS (Any variety).—First, J. Thackray. Second, H. Yardley.

JUDGES.—Pigeons: Mr. Pickering, Carlisle. *Singing Birds*: Mr. Calvert, York.

POULTRY PRODUCE.

My account of poultry produce will, I think, bear comparison with those recently published. My average number of hens for the six months ending June 30th was twenty-two, which gave me in—

	Eggs.		Eggs.
January	37	May	171
February	196	June	239
March	233		
April	131	Total	1106

Of these 1106 I set 178, and hatched 124 chickens, out of which only 14 died (very fair for this season), leaving 110 chickens all hatched between March 6th and May 14th; so that with these and the 928 eggs left for use I can show a very satisfactory balance sheet.—PHILIP CROWLEY.

RABBITS' EARS.

I HAVE been much interested in what your correspondents have lately stated respecting the growth of Rabbits' ears. I have been a breeder of Lop-eared Rabbits myself for some years; but, not having succeeded in bringing the ears of my young Rabbits to the same length as those of their parents, I am inclined to think that there is something wrong in my treatment. Would Mr. Felton kindly inform us what is the best food for

does which are bringing up their young, and also for young ones before they are six months old? and is a small outhouse, free from draught, without artificial heat, sufficiently warm for them?—AMATEUR BREEDER.

I HAVE now four young Rabbits, nine weeks old, with ears $1\frac{1}{4}$ inches long and $3\frac{1}{2}$ inches in width. They were weaned at a month old, and have since been fed with oats, meal, and potatoes, but I find that they have not gained more than half an inch a-week from four to nine weeks old. I should be glad to know whether I have weaned them too soon, and fed them with proper food; also if Mr. Felton would explain what he means by saying he would calculate upon $1\frac{1}{2}$ to 2 inches more than the length which he himself measures, as the actual show measurement?—W. R.

[Mr. Felton of course allowed for growth from the time of measurement up to that of showing.]

BEEES IN A SODA CASK.

I WAS visiting Hornsea the other day; and as I am always on the look-out for anything connected with bees, I saw three or four hives in a garden, but could not imagine what one of them could be unless the owner was supering rather high. I went up to them, and judge how I was amused to find they were in a common soda cask! What with the size of the cask (about 2 feet 3 by 18 inches), with a massive hackle and pankin to fit, it had, as far as size went, an imposing appearance.

On inquiry I found that three top swarms had come off simultaneously, and had all joined together; and as there was no hive large enough to hold the mass of bees they were shaken into this soda cask. I could not resist the temptation to turn up this novel hive and have a peep to see how they were progressing; and surely such a sight was seldom seen. The mass of bees was really enormous, and the beautiful white combs were hanging down to within a few inches of the mouth of the cask; so it seems they are prospering. What a honey-gathering there will be next year, when the owner proposes to take them!

I was very much surprised, on looking over a comb in my own apiary the other day, to find in numbers of cells two eggs, in many three, and in several four. Can you account for so remarkable a circumstance?—J. R. J.

[We shall be glad to know the ultimate result of this Brobdignagian swarm, which has been domiciled in so peculiar a habitation. A plurality of eggs in each cell is not uncommon when the queen is pressed for breeding-space, either by a superabundance of honey, or a paucity of combs, or of bees to cover them.]

LIGURIANS AT BLACKHEATH.

MR. WOODBURY'S Ligurians are certainly very prolific, and beat all my old experiences of twenty-five years with the common bees.

The only swarms I had previously had this season were a prime and second swarm from a stock I had of him last year, which issued on the 9th and 18th of June respectively, and on Wednesday, July 31st, the old lady swarmed again, thus leading out two swarms this year! It was the largest I had had this season. I never before had one so late, and to be a swarm from a swarm shows how prolific these queens are. Of course I returned it to its own hive the same evening, as the bees could not at Blackheath obtain enough to live upon during the winter at this advanced season, although the white clover is still in full blossom. Oh! what horribly cold and ungenial weather we have had. I never knew so bad a summer for bees, although, I think, I shall clear 100 lbs. of honey in tops. I should like to have all Ligurians.

The foregoing was written on Saturday morning, August 3rd. On my return home in the afternoon I found that the old Ligurian queen had again swarmed. I returned her and the swarm the same afternoon at 5.30. On the 4th she again turned out with the largest swarm I ever had— $2\frac{1}{4}$ feet long by 9 inches broad. Again I returned her to the hive (having been two hours living them, as the queen had gone into the fork of a shrub), and on the 5th instant she again swarmed!

I now thought it was high time to stop her ongoings, so in the evening, on my arrival home, I opened the hive, taking out seven combs, and cut out seven queen's cells, and then returned

her majesty to the hive with the swarm and all the combs, and I do not think she will turn out again. The most forward queen I operated upon by opening her cell. She was amazingly strong. I made sure the cold, &c., would kill her during the night, but she was alive and active the next morning, protruding her proboscis. I then gave her some honey on a pin's point, which she took with evident gusto, and grew so lively with the warmth of my hand, that I was afraid she would spring head first out of her cell. I left home for the day, giving instructions to feed her every three or four hours. My first impulse was to send her down to Exeter, as she was the offspring of the queen I had from thence; but I was afraid the journey would kill her, so I ultimately gave her, with two embryos, to Mr. Marriott, of the Crystal Palace, who came down to Blackheath for them, and who, I hope, will succeed with them.

The old stock (Ligurian), has not since attempted to swarm again, and the bees are now working vigorously, and on the 11th instant were sealing up honey. The white clover is still well out with us after the refreshing rains.

I find the queen left in the old stock is laying hybrid eggs; but the bees themselves have the Ligurian blood and dash, and the queen the fecundity so marked in this breed. This stock having swarmed twice, works more vigorously even now with the fresh young ones, than many of the black stocks which have never swarmed at all!

The sparrows are a nuisance. I have shot two or three dozen, and destroyed from fifty to sixty young ones, and yet they still devour my bees.

I could say a good deal as to the untimely destruction of drones, &c., during this untoward season, but have not time. My bees are still (August 14th), sealing up a little, especially the Ligurians, who work like Trojans.—A BLACKHEATH'AN.

"BLACK" BEES.

I ENCLOSE a few insects which at present infest a hive of Ligurians I had from Mr. Woodbury in April. Not having seen such before, I am anxious to know something about them, as well as how to get rid of them. The fact of the regular workers killing them as fast as they can is a proof of their being obnoxious to them. I shall be glad if you can give me any information as to what they are, and how to act with them.—S. S.

[The insects which accompanied your letter are Ligurian counterparts of the "black bees" first noticed by Huber (*vide* page 169 *et seq.* of Tegg's edition), and believed by more recent observers to be old bees with the pubescence worn off from the thorax and abdomen. They are not very uncommon, nor does their presence appear in any way to affect the prosperity of the stock.]

OUR LETTER BOX.

NON-PAYMENT (*H. P. Leech*).—There is no doubt that you have been swindled, and as little doubt that the "Dairyman and Porkman" card which was enclosed "looked respectable," but this artifice is no novelty. According to your statement it is only a simple contract debt, recoverable by suing the "Dairyman and Porkman" in the County Court. If, however, there is no such tradesman at the address given, then we think it was an obtaining goods under false pretences, and that a warrant would be issued for the man's apprehension. If we were in your position we would apply for the warrant, and spare no effort to obtain a conviction.

QUEEN DECREASING IN SIZE (*An Essex Bee-keeper*).—A worn-out and exhausted queen would probably become somewhat smaller towards the close of her life than during her prime, but the alteration would not be sufficient to change a queen of normal size into a "very small" one. You do not describe the process by which you "drew off" the artificial swarm, but as it was successful it appears most probable that it was accompanied by the old queen, and that her diminutive successor which you destroyed, being unsuccessful in her wedding-flights, remained a virgin, and consequently became a drone-breeder.

FEEDING A STRAY SWARM (*A Breconshire Porson*).—Your stray swarm is so late that it is not likely to survive the winter without a liberal supply of food, which should be administered forthwith by means of an inverted pickle-bottle tied over with a bit of coarse lino or cap-net, and placed on a hole in the top of the hive with perforated zinc interposed. Lump sugar and water in the proportion of three parts of the former to two of the latter (by weight), and boiled a minute or two forms an admirable bee-food. Fill the bottle every evening, and confine the supply until the contents of the hive reach from 15 lbs. to 20 lbs. nett weight. If there is no hole in the top of the box, one should be made with an inch-and-a-half centre-bit. Buy "Bee-Keeping for the Many," published at this office, price 4d. You will find an engraving of a good hive-cover in page 17.

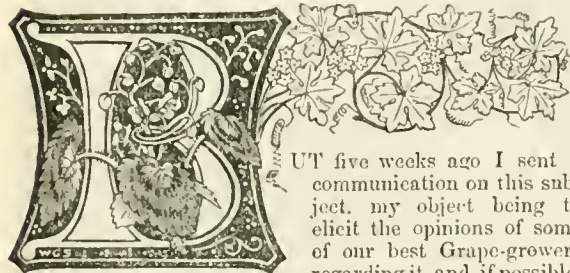
MILK AND BUTTER COOLER (*R. Begbie*).—We do not know of any one who has it on sale. Any whitesmith could make one.

WEEKLY CALENDAR.

Day of Month	Day of Week	AUG. 29—SEPT. 4, 1887.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
29	TH	Bristol and Clifton Horticultural Show.	71.6	47.6	59.6	14	9	af 5	53	af 6	55	af 4	46	af 6	1	0 53	241
30	F		74.7	48.8	61.5	10	10	5	51	6	12	6	16	7	1	0 35	242
31	S	Royal Horticultural Society, Promenade.	71.8	47.2	59.2	17	12	5	49	6	26	7	44	7	2	0 17	243
1	SUN	11 SUNDAY AFTER TRINITY.	70.7	47.6	59.2	20	14	5	47	6	38	8	11	8	3	after	244
2	M		71.6	47.5	59.2	17	15	5	45	6	38	9	88	8	4	0 20	245
3	TU	Royal Horticultural Society, Fruit, Floral,	71.5	47.6	59.5	17	17	5	43	6	55	10	8	9	5	0 39	246
4	W	[and General Meeting.]	70.7	46.4	58.5	17	18	5	49	6	59	11	43	9	6	0 59	247

From observations taken near London during the last forty years, the average day temperature of the week is 71.7°; and its night temperature 47.5°. The greatest heat was 85°, on the 1st, 1843; and the lowest cold 31°, on the 23th, 1861. The greatest fall of rain was 1.50 inch.

JUDGING GRAPES.



UT five weeks ago I sent a communication on this subject, my object being to elicit the opinions of some of our best Grape-growers regarding it, and, if possible,

lead to a standard being set up, which, though it might not be applicable with anything like mathematical exactness, would, nevertheless, indicate the points that must be taken into account before deciding what constitutes the highest excellence in a bunch of Grapes. In regard to the former, I have been so far successful, and as far as the discussion has gone it has been shown more clearly than ever that, as I previously wrote, opinions differ widely. I will now proceed to give a summary of what each writer has said, in the order in which the letters appeared, and offer such remarks as each case may call forth.

Mr. Fowler, of Castle Kennedy, agrees generally with me that some standard should be set up by which Grapes could be judged, and concludes—"Although long of opinion that too much weight has been given by judges to colour, and too little to flavour, still I think that a large allowance should always be made where colour exists in a high degree, and is associated with fine flavour; but without this requisite quality (flavour), I consider no award should ever be made by judges, however pleasing and attractive the appearance of the Grapes may be on an exhibition-table, because without flavour they are unpalatable, and, consequently, unfit for the purpose for which they are grown." Mr. Fowler in the first part of his article corroborates what I said in regard to the blackest bunches of Hamburgs not being at all times the highest flavoured: therefore colour alone is not a safe guide in judging this Grape. With all else that he says I agree, remarking that the "large allowance" he claims for colour, when it is fine, is met by the 2 marks I proposed to give it.

The next communication in order is that from Mr. Dixon, of Watdendale, who himself showed such beautifully-coloured Hamburg Grapes at the Manchester Show. He, too, thinks it very desirable that a set of rules for judging Grapes should be drawn up and published.

Mr. Dixon remarks, "Mr. Thomson does not say in his article (page 37), whether or not he would consider the colour of Grapes a true criterion to judge the flavour by, or whether he considers it requisite on all occasions to taste them." Mr. Dixon cannot have read what I wrote carefully, for he will find it contains the following passage: "Common sense seems to suggest, that as the primary object in growing Grapes is that they may be eaten, the palate should be the final court of appeal," and further on he will read, "The finest Hamburg Grapes in flesh, size

of berry, and flavour I ever tasted were brown, while I have tasted the same Grape jet black, yet sour." Thus it will appear that I do not consider colour a true criterion of flavour in the case of the Hamburg Grape, and I would "on all occasions taste them." With these explanations I am entitled to presume that, generally, Mr. Dixon agrees with me as to the standard that should be set up for judging Grapes.

Mr. Shortt, of Heckfield Place, also agrees with me.

Mr. John Alliston agrees with me "as to the necessity for a recognised standard for Grape-judging," but he thinks that mine is not a correct one, and sets up one of his own, which ignores flavour altogether. He makes the highest excellence 6 points: gives 2 points to colour, 2 points to size of berry, 1 to size of bunch, and 1 to symmetry of bunch. If I had to submit Grapes for competition where this was the standard, I would grow Horsforth's Seedling, which develops all the required points of excellence in a high degree, though in the matter of flavour it is wretched; but, before such a standard, that is of no consequence.

Mr. Thomas Record writes, "I maintain my opinion, that a bunch of Grapes of first-rate colour, be the variety what it may, has much more to recommend it than one of second or third-rate colour." Undoubtedly it has, and 2 points are given to it over its opponents, which are in this respect less fortunate than it.

Mr. Temple, gardener, Balbirnie, Fife, proves that Grapes may be jet black long before they have acquired their proper flavour. He also states that his employers object to Grapes appearing on their table that are not highly coloured, though their flavour may be all that can be desired: which shows that they require every point of excellence in their Grapes, of which fine colour is one.

Mr. J. Douglas writes—"I have often heard it remarked that brown or red-coloured Hamburg Grapes are superior in flavour to black Hamburgs, the varieties being the same, and a gentleman whom I served in the capacity of under gardener, was never quite satisfied with the Black Hamburg Grapes if they finished off with a black colour." About the wisdom of this Mr. Douglas says he was sceptical, yet he admits further on in his article that Hamburg Grapes may be black, yet neither ripe nor high flavoured.

Mr. Hallett writes—"I agree with Mr. Thomson in his remarks on judging Grapes. I consider that all ought to be tasted by judges before these decide upon their awards. Mr. Thomson would give 3 points to flavour, and I should say flavour ought to go a great way in the judging of all kinds of fruit."

A writer who signs himself "BLACK HAMBURG WITH A GOOD THICK BLOOM," is dead against being tasted at all, and says, "There should be men chosen for deciding our merits that should be able to do so without mutilating us in a show-tent." I am at a loss to know why three judges could not take a berry each from the back part of a bunch of Grapes in a show-tent without mutilating it. I have done so a score of times, and could do so as many more, with no injury to the bunch of Grapes.

In the *Gardeners' Chronicle* of August 15th, a writer, who

signs himself "VITIS VINIFERA," goes to the other extreme, and says, "My delight is to store up quality for appreciative and gratified palates; but these exhibitors won't let me. One says you must produce a bunch weighing a stone. Another says that each berry must become a black Plum. Another that I must wear a black coat like a rook. A fourth, that I must have a dusty mouldy surface—bloom they call it—like a Sloe. The eye, the fancy, the whim must be satisfied, whatever may become of quality. And for what purpose? The eye cannot eat Grapes, the mouth cannot crunch a huge bunch at a snap, and bloom is rather a nuisance than not, having something a little fungus-like about it. Quality is the one thing needful; that appeals to the palate—the only sense or organ concerned." This writer admits that the standard I proposed is good, but suggests as better one which I here quote. Flavour, 6 points; quality of flesh and fineness of texture, 2 points; colour, 2 points; size of bunch, 1 point; shape of bunch, 1 point; in all 12 points, half of which this writer gives to flavour, while others I have quoted take no cognizance of it at all. Here, then, is diversity of opinion on the very important subject of judging Grapes with a vengeance.

To conclude, and take leave of this subject at its present stage, I have to remark that, in full view of the various opinions of the writers I have quoted, I still adhere to the standard I suggested. It ignores no recognised quality in a bunch of Grapes. Bloom and colour, so much insisted on by some of the writers, are fully recognised. The only point of excellence put before them is what I still hold to be the one of primary importance in all subjects whose final destiny is to be eaten. If this principle is to be set aside in the case of Grapes, why not do the same with Melons, Apples, and Pears? Some of the finest of our Apples have the ugliest skins, the same may be said of Melons and Pears; while varieties of the same fruits that are the most beautiful to look upon are worthless when submitted to the palate. So palpable is this, that, in judging the fruits just named, they are always cut and tasted. Compare the mutilation of a Melon having three slices cut out of it with a bunch of Grapes that has merely had three berries carefully picked from one of its back shoulders, and mark the difference; yet one writer makes a bugbear of this.

In judging Grapes according to the standard I have suggested, there being three separate bunches say of Black Hamburgs in the class, I would first taste them, and give the highest flavoured 3 marks, the next highest 2, and the third 1; unless it should happen that any one of them was unripe and sour, though black, when I would disqualify it. Then if No. 1 was not so well coloured as No. 2, I would only give it 1 mark for colour, while I would give No. 2 2 marks, thus the equilibrium would be restored, and so on with all the other points. When the shades of difference in any one point proved very small, I would resort to fractions, giving one bunch 1 mark as the case might be, and the other 1½ mark.

In this way something like justice could be done. Absolute justice when any other quality except weight is involved is unattainable, but it may be more closely approximated than is sometimes the case in the present state of matters.

In the case of the Muscat of Alexandria I consider a golden yellow colour always a sure test of high flavour, and the same may be said of the golden-coloured Grapes generally; but not of the black varieties do I consider colour a sure test.—W. THOMSON, *Dalkeith Park*.

ADIANTUMS FOR DINNER-TABLE DECORATION.

At this season, when, owing to the abundance of flowers out of doors, floral decorations are less appreciated than at other times, the Adiantums, from their cool green hue and symmetrical habit of growth, are specially qualified to take their place on the dinner-table, and have long stood high in the estimation of those who have to provide plants for that purpose.

In whatever numbers they are grown it is very desirable they should be in pairs, both as regards size of plants and pots, as then they are most easily adapted to the various forms of arrangement rendered necessary by different sizes and styles of tables; for when corresponding plants on a table are not uniform in height and general appearance, to those possessed of refined tastes, and especially ladies, the effect cannot fail to be disagreeable, let the individual beauty of the plant be what it may.

Adiantum cuneatum is for a table plant decidedly the best of them all, and of it I grow five pairs of different sizes, with a

few young plants to succeed those which become too large or old. To obtain these it is necessary to raise them from seed; for old plants, when divided, never have the green healthy fronds of seedlings. When the spores begin to ripen, which may be known by holding a sheet of clean white paper under a frond, and giving the latter a smart tap with the hand, prepare a shallow propagating-pot by filling it half-full of drainage and the remaining space with a compost of sandy peat and loam, pressed down firmly; over this sprinkle a thin coat of silver sand with a few lumps of the same material the size of Peas, give a good watering through a very fine rose, and then dust on the minute spores from the sheet of paper. Cover the pot with a bell-glass, or with a square of common glass, to prevent evaporation; place the pot in some part of the stove or vinery where heat, shade, and moisture can be obtained, and in a short time the whole surface will be green with the Lichen-like rudiments of the young Adiantums.

When the first proper leaves make their appearance thin-out a large proportion of the plants with the point of a budding-knife, and when two tiny fronds come up pot-off in three-inch pots, placing three in each, by which means good-sized bushy plants are sooner obtained than by potting singly.

Throughout the winter the plants should be kept rather dry, to prevent damping, and in spring shifted when necessary into pots a very little larger. "Give small shifts, and give them often," was a maxim which an old and successful Fern-grower used to din into my ears, and to Adiantums grown for the table this rule is especially applicable; indeed, they ought to be kept rather under-potted, otherwise they are apt to outgrow the size requisite for the purpose for which they are intended.

Adiantum formosum is a beautiful Fern for the centre of a table, having graceful drooping fronds of the liveliest green. It is propagated by spores, and by separating the underground rhizomes.

Adiantum setulosum is usually called a stove Fern, but succeeds well in a shady greenhouse, where it forms a low-growing and compact plant. Propagated by division.

Adiantum capillus-Veneris.—This, from its dwarf and rambling habit, is not well suited by itself to form a good table plant, but a circular wire basket, 4 inches deep and about a foot in diameter, filled with it, and having a plant of *Pteris serrulata* in the centre, forms a very ornamental object for a large table, the sides of the basket being stuffed with *Selaginella denticulata*, completely hiding the wirework. I have had two of these for some time, one of them being nearly always on duty in the dining-room or elsewhere, while the other is recruiting its health in a late vinery.

For growing Adiantums generally, I find two parts of loam, and one each of sandy peat and well-decayed leaf-mould, with a liberal admixture of silver sand, very suitable. As for cocoanut refuse, if not very rotten, its action can only be mechanical, giving a certain degree of porosity to the compost, which condition can be as effectually secured by materials more easily obtained, while if thoroughly decayed it supplies no nutriment which is not found in leaf mould.—ATRSHERE GARDENER.

MARÉCHAL NIEL ROSE.

THE Gloire de Dijon makes an excellent stock for this Rose, and those who possess the requisites—namely, the plant of Gloire de Dijon and the buds of Maréchal Niel, will, I venture to say, be fully rewarded for the sacrifice of a part of an old favourite by the superior size, beauty, and the exquisite colouring of the new.

Allow me to suggest the experiment to your readers. The stock in this instance appears to exercise an improving influence, which is very perceptible. The union of the bud and stock is perfect.—T. FRANCIS RIVERS, *Sawbridgeworth*.

Is it possible for an admirer of Roses to be silent, when any attempt is made to slight this glorious Rose? We will not trouble to mention the Roses which are named as its most effective rivals, but we are sure that the Maréchal stands far in advance of anything in its class. It seems as if careful of its delicate beauty, by dropping its blooms sufficiently to protect them from the scorching sun and rain, and you have to raise them to see their merits.

Our experience of the Maréchal is as follows:—We planted out in April, on a south border, forty plants of this Rose. In three weeks they began to show flower-buds very freely; by the middle of June these began to open, and from that time

to the present we have had a succession of five or six really good blooms open at once, some of them magnificent specimens, so much so, that the Rev. S. R. Hole, of Cauntton Manor (no mean judge), declared upon seeing them, his entire satisfaction at the success in the growing and blooming of *Maréchal Niel* in the open ground.

Every plant was worked on the *Manetti* last February, and many of them have produced four and five blooms each, and at the present time we have between thirty and forty bloom-buds on the forty plants.—H. MERRYWEATHER & SONS, *The Nursery, Southwell, Notts.*

TIMES FOR TRANSPLANTING AND ROOT PRUNING.

I OBSERVE in your Journal of August 1st, that Mr. Abbey, in his article on the culture of the *Apricot*, recommends that the trees should be transplanted in the middle of September. Now this very early moving so wholly contradicts one's old-fashioned notions on the subject, that I, for one, should be very glad to have your confirmation, or otherwise, of Mr. Abbey's dictum.

I have to state for my own part, that the only trees which did not do well with me in the transplantings of last autumn, were three dwarf Apples that I had from the nursery in the middle of October, and planted the same afternoon—two *Manks Codlins*, and one *Hawthornden*, healthy trees, 4 or 5 feet high, and all of them wonderfully full of blossom-buds. One of the *Codlins* died outright, the second failed to set a fruit, and the *Hawthornden*, after opening its blossoms weakly and unhealthily, shows now only one Apple, and that half starved and good for nothing. I am inclined to take this as a lesson, never again to transplant so early by a fortnight.

Since writing the above, I find in the Journal of August 15th, that Mr. Radelyffe transplants his *Roses* by the score in August, and that your valuable contributor, Mr. R. Fish, recommends root-pruning directly the fruit is gathered.

Now, do tell me what I should do. My guide hitherto, Mr. Rivers, says, Root-prune—that is, lift or remove your trees in the end of October. These new and startling instructors say, Do it at once—that is, ten weeks earlier. I can only say for my own part, that my trees, though the fruit is gathered, are in such luxuriant foliage, that I shall wait.—BETA.

[We should not prefer transplanting fruit trees in the middle of September, unless the kinds were early fruiters, the month very dull, and the previous months had been so warm and dry as to ripen the wood well. We have transplanted in the middle and towards the end of October, very successfully, but at the first period, if hot sunny days set in, as they often do at the end of October, we have taken the precaution to shade the trees with a few evergreen boughs, to arrest evaporation. All things considered, as soon as the leaves begin to change, long before they became quite yellow and faded, we would not hesitate to plant after the middle of October; but we should not think of doing so when the leaves were all green, unless in exceptional circumstances, where we could shade, so as to let the leaves fall off maturely, and keep the wood plump, instead of shrivelled. If these objects are secured, then the sooner transplanting is effected, so as to secure the advantage of the heat in the soil to promote rooting, the more thoroughly will the plant be established for next season. Taking other circumstances into consideration, and which must be looked to as well as transplanting, fruit trees in general will give least trouble, and with that least trouble thrive the best, that are moved between the last week of October and the first week in November. By that time growth will be at a minimum, the leaves of deciduous trees on the wane, no danger of wood shrivelling, and a good deal of heat will be still left in the ground. Trees which ripen their wood early may be planted early with propriety.]

As to root-pruning: as a general rule, with most trees, as Apples and Pears, it will be towards October before the fruit is gathered. Root-pruning and transplanting are very different practices. The former is intended to give a much more gentle check to the power of growth, and by no means such a check as transplanting involves. We still think what was advanced by Mr. Fish, as to early root-pruning, so as to check growth, and promote fertility, is quite correct. You may root-prune after November, and that will check growth for the following summer, and give you more fruitful trees in 1869; but if you want your root-pruning to tell upon the fertility of 1868, you can scarcely do it too soon after the fruit is gathered, if done mo-

derately. If done earlier the fruit would shrivel. If done early and severely, the wood would shrivel, and the object would not be gained. If done to such an extent as merely to arrest growth, and not shrivel the wood, but yet to have a considerable amount of force from the sun to act upon it, then the sooner the operation could be safely performed the better for the fruit-buds of the following year. We have taken out a small trench, and cut the points of the roots of a luxuriant *Cherry* tree in September, but then the fruit had been gathered in July and August, and the wood was firm, and a few potsful of water near the hole prevented any flagging. The autumn sun studded many shoots with fruit-buds, which but for the arresting of growth would have continued wood-buds all the winter. Early transplanting, and early root-pruning must, therefore, be performed with more judgment and care than doing either in winter. Of course, lifting a deciduous tree in full foliage is always attended with great risk. We have moved *Peach* trees in winter, and had a good crop from them the following year; but when it could be done, we would prefer pruning the top almost as much as needed in August and September, and lifting them as soon as the wood would not shrivel in the beginning of October, even though a good many of the leaves were green, and we were obliged to give a little shade in the forenoon sun, so that they might ripen well before falling. Such trees generally repaid the attention given, by a full crop the following year. Of course, we are alluding to large fruiting trees. Such moving can only take place when the trees are on the spot. When moved from a nursery at a distance, it is best to defer the operation until the wood is ripe, and the leaves beginning to drop.

We shall be glad to see the opinions of others, as the subject started by our correspondent is of much interest and practical importance.]

THE DOUBLE WHITE ROCKET.

I HAVE read with much interest the able article by an "AYRSHIRE GARDENER," on the *Double Rocket* (page 95); and all lovers of ornamental hardy plants must feel obliged to him for pointing out the principal causes of the plant so often dying off, and the remedies. One point, however, he has omitted, and on this I trust he will enlighten us. It is, whether the *Rocket* he treats of is the old dwarf *Double Rocket*, or the more robust tall one, which in the south of England has in most places superseded the former?

The tall *Rocket*, I may remark, is plentiful enough with those who take any care to make it so, but the dwarf variety is far from being common; indeed, I believe it has been inquired for in the columns of this Journal without any response having been made, and many old gardeners thought it lost to the country. This, however, is not the case, and it is very probably the *Rocket* to which "AYRSHIRE GARDENER" alludes as being so liable to die off. It is, doubtless, this tendency which makes it so scarce in the south of England, where the larger *Rocket* can be had in any numbers, and near here almost every cottage garden produces plants which are robust enough. Some growers call this the *French Rocket*. It certainly deserves to be more extensively grown, as twenty or more spikes of bloom, each branched into many spikelets, can be produced on plants not two years old, and its sturdiness is also much in its favour. When grown in good soil it is about 3 feet high, while the dwarf *Rocket* rarely exceeds 1 foot in height, and is often much less. The closeness of the flowers on the stem of both cannot be improved upon. Some of the best examples of the taller variety equal any *Giant Stock* ever grown, being a foot long, and closely set with bloom.

The flower-heads of the dwarf kind rather form a short conical spike than a cylindrical one; but for many years I was a stranger to this variety, and, in fact, despaired of seeing it again, when, being in Lanarkshire two years ago, I met with it in rather an old-fashioned garden, and obtained a plant, which, after being divided in the usual way, has this season flowered. I am sorry, however, to see the same symptoms of the plant's dying as those "AYRSHIRE GARDENER" complains of, and, in fact, the best and largest plant has died since flowering, some of the smaller ones are following, and the remainder show their dislike to the soil or the attacks of the insects mentioned by the writer named. They seem more disposed to produce side shoots upon the old flower-stalks than around the collar of the plant. This tendency is not so common in the large white, and consequently that variety is not so readily propagated by cuttings of the flower-stalks, unless the operation

is performed before flowering, when the cuttings succeed very well. With me, however, the plant grows fast enough, and every year, in August, I take up a few large old roots, and pull them to pieces with a crown and some roots to each. The divisions are planted in nursery rows, and during the autumn become good, well-established plants fit to plant anywhere, and nothing can well exceed their loveliness in May and June, when they are in full bloom. A row of them was planted around an irregular clump of shrubs, with a row of Primulas (all of one kind), in front; and the plants being large, and having twenty or more spikes of bloom each, the whole formed the most effective object in the garden at the time. I did not have them tied up but allowed a portion of the shoots to lean against the shrubs (*Berberises*), behind, and some were bent more forward, but their abundant flowering made amends for their irregularity, which would not have occurred with plants sparingly furnished with bloom. I may observe that there is a little tendency to go off in the manner described, but with me not more than two or three per cent. of the two-years-old plants die in this way. Among those older the losses are a little more numerous, but there is no advantage in having plants older than stated, as they become deformed and less ornamental in every respect.

Of the other varieties of Rocket, the Double Purple is a great favourite with some, but it is certainly less showy than the Double White, which, when seen in the twilight of an early summer evening, has a striking effect; the former is not so robust as the latter, and is more likely to die off, nor is it so tall, but in other respects resembles it. In old gardens a plant called Double Yellow Rocket used to be very common, but it certainly is not a Rocket. Nevertheless, it is a highly ornamental plant and accords with the Rocket very well, it seems to thrive best in a damp soil, and in such a place is very beautiful; it seldom exceeds 2 feet in height, but is very effective. I should be glad to hear of more varieties of this popular flower, and think there are two or more shades of purple—one more a pink than a purple, but these varieties are not so plentiful as they ought to be.

As to making useful bedding plants of Rockets, I have no hope of that, but for presenting a mass of bloom all at one time, nothing can possibly exceed the Tall Double White. Many years ago I used to propagate it extensively, in company with Double Purple Catchfly for early summer decoration, and when good nothing could exceed the beauty of the two. Unfortunately, neither blooms early enough to meet the wants of our spring gardens, hence the necessity of employing them when they have not to be followed by bedding *Pelargoniums* and the like. As the Tall Double White Rocket, unlike *Dielytra spectabilis* and other plants, never presents an untidy appearance for a long period, its presence when not in flower can be tolerated; indeed, the tidy compact growth of the plant recommends it to notice for ornament in winter, and few plants can be transplanted more readily, or propagated with greater ease and certainty. In the latter operation I merely take up a few old plants early in August, if the weather is moist, and having pulled them to pieces, preserving a little root to each, the largest are not infrequently planted at once in the border where they are to remain, and the smaller ones in nursery rows in a sandy soil. All the attention they receive consists, perhaps, in watering them for a time after planting if the weather prove very dry. Having plenty of plants I seldom care for cuttings. The Tall White is more truly an herbaceous plant than the dwarf variety. The flower-stems usually die as soon as the flowers begin to fade, but cut into lengths before flowering they strike well, and where plants are scarce the plan may be adopted with advantage.—J. ROXBOROUGH.

TABER'S EARLY PERFECTION PEA.

In allusion to my remarks respecting Taber's Early Perfection Pea, which appeared in your Number of the 15th inst., as coming into use several days before Sangster's No. 1, I find you have come to the conclusion that my Sangster's is not true. It may, therefore, be well for me to explain how the Early Perfection compares, as regards earliness, with other sorts. I find it ready to gather about five days before Beck's Gem, Long-podded Tom Thumb, Maclean's Little Gem, and my Sangster's No. 1; and, further, to show that my Sangster's would be true, the stock now called Essex Rival follows three or four days afterwards, and Dickson's Favourite, with Laxton's Prolific, about six days after Sangster's. I regret I had sent away the last of my stock of Ringleader when I had my trial Peas sown,

or they should have been tested with it, but finding that Taber's Perfection came in for use as many days before the others, as repeated trials have shown me Ringleader will do, I considered I might safely thereby ground my opinion as to its being equally early with any other sort grown, more stout, vigorous, and productive, and a longer podder. It has been my custom carefully to test the properties of Peas, side by side, for upwards of thirty years, and any incorrectness of such an established popular variety as Sangster's No. 1 I doubtless should readily detect.

I should not have written about Taber's Early Perfection, had I not seen remarks from two of your correspondents, speaking highly of the Pea as a first early, and for produce; and having tested, and being much pleased with the Pea, I was glad to confirm their remarks, and believe I have not overrated its worth. I had observed that the Chiswick trial of the Pea, as in the report, showed a difference from my own trial. I have a further trial of it, with Ringleader and others, now in progress, and trust the season will enable me to give the result.—STEPHEN BROWN, *Sudbury, Suffolk*.

Would you allow me to add my testimony to that of your correspondents, Mr. Dean, Mr. Stephens, and Mr. S. Brown, as to the value of Taber's Early Perfection Pea? I should not have troubled you with these remarks if the above-named gentlemen had not omitted to mention one of its best qualities, flavour, which is far superior to that of any early variety grown, being, amongst round Peas, what Champion of England and Veitch's Perfection are amongst the wrinkled kinds. Mr. Brown is not in error, when he says it is earlier than Sangster's No. 1, for it has proved to be so with me. It is very distinct, and, I believe, when it becomes better known, it will drive Sangster's No. 1, and all the first earlies out of the garden. I would advise all your readers to try it another season; if they do not, they will miss a treasure. I shall grow it largely for the future. I have no doubt as to my stock of Sangster's No. 1 being true, it having always given satisfaction until Taber's Early Perfection turned up.—W. INGLE, *Gardener, Birch Hall, Colchester*.

OULTON PARK.

I EXPERIENCED no small degree of pleasure when I found myself the other day travelling among scenes so familiar to me as those in the neighbourhood of Oulton Park. After alighting at the Hartford Station, a pleasant drive of six miles brought me to the Park, where I found every department, owing to Mr. Muir's skilful management, in the best possible order.

I must, in the first place, give a passing word to the beauty of the scenery outside the Park. About one mile north of the Chester road, is the commencement of the drive which leads to the Park. On each side of this drive there is, for a considerable distance, a triple row of Scotch Firs; here and there large masses of the common Bracken Fern are to be seen growing at the base of some of the trees, and, pushing their fronds up amongst the lower branches of the trees, they have a most pleasing effect, the beautiful green fronds of the Ferns being shown off to great advantage by the dark masses of the Fir branches. The space between the Fir trees and the road is thickly covered with the wild *Rubus*, several varieties of *Erica*, and many other little floral gems peculiar to the soil. Every plant and flower appeared in perfect health, and all seemed striving to contribute their share towards the formation of a picture of natural beauty not often met with in the smoky atmosphere of Lancashire. At the time I drove through, all nature seemed at rest, not a leaf stirred, the serenity of the lovely spot was only disturbed by the clatter of the horse's hoofs, and the roll of the wheels, and I confess I wished my lot was cast in a similar part of the country, where the purity of the air has so much influence on the growth of both wild and cultivated plants.

A sudden halt at the Park gate put an end to my reflections, and soon afterwards the natural beauties of the neighbourhood were for the time forgotten, for I had entered the gardens, and the dazzling scene which met my view, caused me for the time to forget those more humble but not less interesting forms of floral beauty on each side of the drive across the forest.

On entering the gardens from the west we pass through the arboretum, which is planted with choice hybrid *Rhododendrons*, and other American plants. On one side of the arboretum is a magnificent Cedar of Lebanon, which I was glad to see in a much more flourishing state than it was some years ago. On

endeavouring to discover the cause of the evil, I found that the ground was charged with water, and I at once had some deep drains put in near it. In cutting the main drain through the arboretum, there were scores of drains discovered that had long been partly filled up, and in these water was continually standing, so that the whole of the ground surrounding the tree was full of stagnant water. It was astonishing how soon a change for the better took place after the water had been drawn away from the roots; the foliage soon began to assume a healthy, dark green hue, and during the following summer the tree threw out vigorous shoots all over its branches, and now it looks as if it would weather the storms of several hundred years.

Behind this noble tree there is a fine background of shrubs and evergreens of various kinds. The belt of trees and shrubs is continued in an irregular line all round the south side of the arboretum and flower garden, concealing also the stables, laundries, brewhouse, &c.

After entering the arboretum we turn to the left, this brings us on to a terrace-walk, on each side of which are planted most of the choice kinds of Hybrid Perpetual Roses; these are planted in beds about 2 feet square, which are filled with bedding plants, which look exceedingly gay, and when care is taken to plant colours in each bed to harmonise with the colour of the Rose above them, as at Oulton, such beds not only give a beautiful finish, but are useful for shading the ground, and keeping the roots of the Roses cool. If, moreover, a good supply of fresh manure and loam is added every year, there is no fear of the Roses being impoverished by the bedding plants.

On leaving the arboretum we enter the flower garden, but before proceeding further, I will note what I saw in the houses in this garden. The first house I entered was filled with a miscellaneous collection of plants in bloom. Amongst these I noticed several well-grown specimens of the old *Fuchsia fulgens*, in splendid condition. This is a plant one very seldom meets with now; the rage for new *Fuchsias* has almost driven this fine old plant out of cultivation, which is to be regretted, for few plants are more useful or ornamental than it is when well grown. In the same house I noticed fine specimens of several of Mr. W. Paul's Nosegay *Pelargoniums*. These are also most useful for conservatory decoration. After passing through this house I entered the Camellia-house, in which there is a splendid collection of well-grown plants, which promise to afford the usual magnificent display of bloom. The late Mr. Errington more than once referred to these beautiful plants. There is something in the soil at Oulton that suits the Camellia remarkably well, for more magnificent Camellias I never saw than those grown in this house. The house in which Mr. Errington originally grew them was swept away in my time, and was replaced by a new one, yet the plants, when I first undertook the management of the gardens in 1860, were looking well, although they might almost as well have been in the open air. They have still that fine appearance under Mr. Muir's management. In the front of this house I planted, in 1862, some Roses, one or two of them were *Gloire de Dijon*, worked on the *Manetti* stock. I also planted some young plants of *Fortune's White Banksian* Rose, in which I inserted several buds of some of the most choice and delicate of the Tea Roses. These have all done well, and, Mr. Muir informed me, furnish an abundant supply of beautiful blooms throughout the winter and early spring months. These, I am sure, Mr. Muir finds invaluable, as Lady Grey Egerton is so fond of Roses.

I have before recommended very strongly *Fortune's White Banksian* Rose as a stock on which to graft or bud any of the tender kinds of Tea Roses. It possesses this great advantage over every other kind of Rose stock—namely, that at any season of the year the bark will separate very freely from the wood, whether young or old, so that if good buds can be obtained the plant is always ready to receive them. I mention this fact particularly, because I do not think it is generally known how valuable this stock is for working the Tea Roses on. It is also so easily propagated, and grows so freely, that plants fit for working may very soon be obtained after the cuttings are struck.

Leaving the Camellia-house we enter the cool Orchid-house. Here there are several really good species growing very luxuriantly, and amongst them Mr. Skinner's new *Epidendrum nemidophorum*. This plant is the finest in the country, and was the first that flowered in it. In 1865 it threw up a good spike of bloom, this season it has borne several; it appears to be in good health, and is growing very freely.

The next house entered was the East India-house; here the

plants were all looking well, and growing very freely. Much credit is due to Mr. Muir for his skilful management of the Orchids which it contains. When I gave up their management in 1865, they were just emerging from the "Slough of Despond."

Between the East India-house and the cool Orchid-house there is a space left, with the view of building another house. Here Mr. Muir has a lot of *Willis's* Bronze and Gold *Pelargoniums*, and a grand sight they are. Mr. Muir is very much pleased with them, and told me he thought they were much more useful as bedding plants than the *Tricolors*, an opinion which is now becoming somewhat general.

At the end of the East Indian Orchid-house the flower-garden commences. The beds are all on grass, and there is no particular form assigned to them. They are, however, all very skilfully planted; in fact, I have not seen any bedding-out so well done this season. All the beds were covered with a perfect mass of bloom, and the colours were well balanced. The garden is bounded on the south side by a remarkably fine belt of evergreens, which were much admired by my friend Mr. R. Fish, when he visited me at Oulton, in 1863.

Quitting the flower garden, I entered the kitchen garden. Here one of the grandest sights to be seen in the gardens of this country met my view. There are no ribbon borders that I have ever seen to equal those at Oulton Park, and this season Mr. Muir has in them a very pleasing combination of colours, which are well blended, and the calculations as to the height of each individual plant have proved quite correct. Mr. Muir's variety of *Lobelia speciosa*, which is the best I have ever seen, is here most beautiful; this, and Mr. Tyerman's variety of *Blue King*, are perfect gems. Mr. Muir has raised the ribbon borders at the back several inches higher than they were in my time, and this has very much improved them. Mr. Fish told me, in 1863, that this was all that was wanted to make them the finest borders in the country. Passing through this blaze of flowers towards the north end of the gardens, two rows of *Viola cornuta* met my view, these were planted on the border in front of the forcing-houses. They were a mass of bloom, and had continued so since the 15th of April. The rows were nearly 4 feet wide; of this, and Mr. Bennett's variety, which I saw in great beauty with Mr. Tyerman, a few days ago, I shall have something to say ere long.

The kitchen gardens were well cropped, all the crops were in a very flourishing condition, and every part was scrupulously clean, and free from weeds. There had been splendid crops of Grapes, Peaches, and Nectarines, in the early houses, and there were fine late crops of Grapes, &c., coming on. In the Fig-house was one of the finest crops of fruit I have ever seen, and the crop which I saw Mr. Muir told me was the second the trees had borne this year.

After passing through this fine range of houses, I took a stroll through the pinetum and pleasure ground. Here all the magnificent specimens were growing very freely, and I was pleased to see that very little harm was done them by the severe spring frosts. They suffered terribly in the never-to-be-forgotten winter of 1860, which commenced just three months after I undertook the management of the gardens at Oulton Park.

In conclusion, I must again say how delighted I was to visit Oulton once more, and to find it looking so well. It was doubly gratifying to me after spending several years of anxious labour in restoring this fine old place, to see my efforts brought to such a successful issue by Mr. Muir, whose kindness will always make my visit to Oulton one of the bright spots in my memory.—J. WILLS.

POTATO CULTURE.

PREVENTION is said to be better than cure. As no effectual remedy is yet known for the Potato disease, our attention might be directed towards the former rather than the latter.

I grow a few varieties of both Round and Kidney Potatoes, and I invariably secure a fine crop, and almost entirely free from disease. My success I mainly attribute to the thorough ripening of the tubers that are intended for seed, before they are dug up. They are afterwards allowed to lie on the ground to green before they are stored away for the winter. The old plan of greening I believe to be good. It prevents premature sprouting in the early sorts, rendering the removal of the sprout unnecessary. We know that the oftener a Potato is subjected to this process the more it loses its productive qualities.

In selecting the seed-tubers I find that, for early purposes,

those which are of a size rather above the half size produce the evenest and finest crop. By planting only well-ripened whole Potatoes a much better crop is obtained than from sets that have been subjected to the removal of the sprouts and to cutting; besides, fewer blanks are observed in the rows, and disease, to a certain extent, is obviated.

There are certain sorts which are known to resist the disease better than others, subject, perhaps, to seasons and localities. These kinds are, however, often of inferior quality.

I will mention a few of the varieties which I grow for early and late purposes. For frame work the old Ash-leaved Kidney and Hardy's Prince Albert answer better than any other kinds that I have tried. The latter is somewhat the earlier of the two. Myatt's Ash-leaved Kidney is a favourite which I never lose sight of. Wheeler's Milky White is an excellent second early sort. The three years that I have grown it not one diseased Potato has been found. The Dalmahoy is a large cropper, and where a large family is to be supplied all the year round it is invaluable. The Coldstream Early is an excellent-flavoured and handsome Potato, but not earlier with me than second early sorts. The old Fortyfold, for flavour and every good quality, has, perhaps, not yet been eclipsed by newer and more puffed-up varieties. It, however, requires good cultivation to have it large and fine. There are various other old and well-tried kinds that I would not give up for some of the recent introductions.

These remarks may induce others to throw out hints on Potato culture—a subject which is far from being exhausted.—W. H. C.

LLANBERIS AND ITS FERNS.

"Be sure you bring me a lot of *Asplenium viride* and a Holly Fern or two," said a friend to me, as I was starting for a tour in North Wales; and another friend chimed in, "And don't forget me if you should fall in with *Woodisia* and *Asplenium septentrionale* in some of your rambles."

"All right," said I, "I am going to the land of Ferns;" but I laughed in my sleeve at the grand ideas of those who only knew what Fern-hunting was by name.

Years ago, and Fern-hunting about Snowden was not only Fern-hunting, but Fern-finding. Now all is changed, "pteridomania" has seized upon young and old, and people who hardly know a Fern from a flowering plant, will have a fernery because it is the fashion to have one. And why not? It is true they cannot be worried to look for the Ferns, but they are quite ready to give the best price to those who will take the trouble off their hands. So Fern-hunting has become a trade, and little tables set out with rare and dainty Ferns stand by cottage doors, and instead of giving a nurseryman a couple of shillings for a Fern raised from seed, you give one shilling to a poor man who finds Fern-collecting more profitable than field labour, and ruthlessly seizes on all the rare Ferns he can find, drags them from their hiding places, and thanks Providence for the "fashion" that brings meat and white bread to a cottage where it has seldom been seen before.

There is also, I fear, a darker side to the picture, for I have heard of Ferns once accessible to the botanist in a morning's ramble, being removed from his path to safer localities, so that hurried visitors may be compelled to buy if they are determined to have; but I hope this is of very rare occurrence, and I only mention it to show how much danger an indigenous plant may stand of being exterminated from a country.

Yet in spite of all these disadvantages, Nature has ways of her own of repairing, in a wonderful manner, the ravages of man, and in many a wild nook, and on many a mountain height, rare and beautiful Ferns still exist in the neighbourhood of Llanberis; Ferns that look none the less tempting, in that they are only to be found after toilsome, and sometimes even hazardous scrambles.

But it is not the Ferns alone of Llanberis that are so charming; flowering plants are not outdone by their acrogenous neighbours, and each month of the sweet spring-tide ushers in the fair blossoming of many a mountain plant. Nor is it the vegetable world that constitutes the only spell that yearly attracts so many Saxons to the land of the Cymri. The grand old mountains, now partially veiled by fleecy clouds, now towering above them heavenwards, now as if blotted out from the face of creation, have a voice of their own, a power of attraction, not given in like measure to any other created thing. And then there are the people, so unlike other people in their trusting simplicity, their grateful recognition of any little service done

them, with their broken English, or their rich guttural Cymraeg, their picturesque costume (fast dying out), and their simple cottages dotted over the mountain side. Yes, it is the people, the mountains, and the plants, that together form the charm of Wales.

Here and there, amongst the very poor, you meet with a nature-formed botanist. I found such an one, and had to blush again and again at my own poor and lazily-acquired attainments, as he explained to me, in broken English, through what difficulties he had climbed the tree of knowledge, his "dim Saesneg," and dim Latin standing in his way at every step.

I asked my poor friend to come and see my collection of dried Ferns, and never shall I forget the look of keen enjoyment that passed over his intelligent face, as form after form of the curious and grotesque varieties appeared. Every now and then he looked up at the Welsh landlady who also came for a peep, with some quaint remark.

"Mrs. Thomas, tell the lady that though I am a poor man, I would not take five pounds for this grand sight." Or,

"Mrs. Thomas, tell the lady these are better to me than my dinner." (I had ordered him a good one.)

After a time the climax came. "Mrs. Thomas, tell the lady I shall take her to see *Asplenium germanicum*, where I did take Mr. Babington. Yes, indeed, she shall go, for of all the people I ever did see she is the biggest whatever."

So I went, bound to secrecy, and with my eyes metaphorically bandaged till I should arrive at a given spot; a long drive, a steep ascent, and then, "Yes, indeed, we must climb up there (far away in cloud-land), and we must have a rope, and —"

It is a fact, that Mr. Babington, under the guidance of my friend, did see *Asplenium germanicum* in its mountain home; but it is, alas! also a fact, that my coward heart failed me, and I did not see it, though I have two fronds gathered from it. I would not even ask for a plant, for *A. germanicum* is very rare as a British species, and I would not willingly have one habitat destroyed.

"Well, indeed," said my friend, as I ignominiously retreated, "but it is a great pity whatever."

However, I consoled myself with *A. septentrionale* (the very finest I ever saw), and *Woodisia ilvensis* dragged from its fastness by steadier hands and head than mine, and with a basket-load of *Allosorus crispus*, that grows in wondrous tufts of brilliant green amidst the slate debris of the grand old Glyder Fawr.

On the same range of mountains, not far removed from Twl Dû, or the Devil's Kitchen, was the rare *Lloydia serotina*, in fruit at the time of my visit. It has been found in the same locality for very many years, and exists there still, thanks to the break-neck or otherwise evil character of the locality where it makes its home.

Descending from Twl Dû to Llyn Ogwen, whose dark waters lie guarded on every side by still darker mountains, we find by the side of the mountain streams *Asplenium viride*, and we may notice, if we search diligently, that a few stray plants of this little Fern have rooted themselves, together with *Asplenium trichomanes*, in the interstices of the stone wall which guards the waters of the lake; but I would earnestly hope that these few visitors may be left to live unmolested. In the same wall *Cystopteris fragilis* still grows, but there is not much left, and I fear ere long it will be a thing of the past as regards this locality.

Beneath the boulders of rock on the hillside, I found *Poly-podium dryopteris* intermingled with *Hymenophyllum Wilsoni*. *P. pleuropteris* is to be found in abundance nearly everywhere. Of *Lastrea montana* you become very wearied, it is far more abundant than *L. Filix-mas*, and there are numberless forms of *A. Filix-femina*, some crested, some lacinate, some decom-pounded, and all full of grace and beauty. *Blechnum* or *Lomaria* spicant grows sparingly about the bogs, which are bordered in places with a pretty star-like Saxifrage (*S. stellaris*).

But to return to Llanberis and its glorious Pass, where riven mountains lay strewn about in grand confusion. Keeping to the range of the Glyder, we find *Meconopsis cambrica* and *Pinguicula vulgaris*, this last growing to a large size, and, as you near the head of the Pass, in such quantities that the ground is blue with them. On the opposite, or Snowden side of the Pass, Nature has dealt out her treasures even more lavishly. There I gathered *Trollius europæus*, with its crowded yellow petals making it look so like a "double" flower. There, too, I found *Saxifraga stellaris*, *Alchemilla vulgaris*, and plenty of Ferns.

First, feathering out from every boulder of rock was *Polypodium phegopteris*—"only phegopteris," as we disdainfully remarked. A little higher up, and in more scant quantities, came *P. dryopteris*, so fresh and vividly green, that I pounced upon it at once from a great distance; not that I wished to bring away the roots, only to a Fern-collector the finding fresh habitats for any Fern is an intense pleasure. Higher still *Polypodium Robertianum* grows, then *Asplenium viride*, and then *Polystichum lonchitis*, but at such an elevation that I sat down in despair, and sent a mountain child, the pretty daughter of my botanical friend, to gather it for me. Sometimes I came on a patch of *Hymenophyllum Wilsoni*; but both *Wilsoni* and *tunbridgensis* grow in masses on the rocks overhanging the river nearer Llanberis.

Wandering through upland meadows I discovered *Lastrea Filix-mas*, var. *propinqua* (the *Lastrea propinqua* of Mr. Wolleston); it is a beautifully marked form, whether regarded as a species or as a variety, and it occurs in great abundance apart from the normal form of *L. Filix-mas*, which seems to indicate a distinct specific character.

In these same mountain tracts *Gymnadenia conopsea* was scenting the whole air with its wonderful fragrance; and in company with it were *Habenaria chlorantha* and *bifolia*, with *Listera ovata*. I also gathered, but only in one small locality, *Convallaria multiflora*. Wherever I came on spongy ground I was sure to see the bright blue blossoms of *Pinguicula vulgaris* rising up amidst sheets of golden *Narthecium ossifragum* (the golden Maiden-hair of olden days), with the very roundest and fattest of round-leaved *Droseras*.

Turning from wild flowers to Ferns, there were strongly-marked varieties of *Pteris aquilina*, and amongst them very characteristic specimens of Mr. Moore's *vera* and *integerrima*. In many places the hills are literally covered with *Lastrea montana*, but though some of the plants were decidedly crenate in character, they did not appear sufficiently marked to be worthy of a distinct name. *Lomaria spicant* is not distributed commonly. I found two plants of the variety *bifida*, and one of *ramosa*. *Asplenium adiantum nigrum* is also rare at Llanberis, and I met with no *Polystichums* but the one plant of *lonchitis*, which was found for me; my botanical friend assured me that he had met with several plants of the variety *lobatum*: I should like to have traced out the history of these specimens, so as to have discovered their origin, but I was unable to do so.

Most of the Ferns which I have enumerated are local in their choice of habitats, and no one must expect to find them all at once. If a collector is simply wishing for species, and his time is limited, the best plan is to hire the services of a local botanist, for a stranger might hunt for weeks together without being able to "drop" upon the home of *Woodсия ilvonsis*, *Asplenium germanicum*, or even *Polystichum lonchitis*; but for the search after varieties the collector can scarcely go amiss, and as he wanders about he will be sure to pick up many a goodly species by the way.

From the wild plants I have spoken of as being in flower, it will be seen that my visit was made late in the spring, or rather early in the summer, and I have consequently only mentioned a few of the botanical treasures which surround Llanberis on every side. Other botanists have been more successful, adding *Silene acaulis*, *Saxifraga hypnoides* and *oppositifolia*, *Rhodiola rosea*, and many another pretty form to the list I have named, indeed I think few places in England can boast of superior advantages for the botanist.

The great drawback to Llanberis is the slate quarries, with the constant explosions that the blasting produces. Hour by hour, as the clock strikes, at the sound of a bugle, the thundering blasts bellow forth, and vast masses of slate are seen to fly up into the air amidst smoke and dust, till the huge rock appears like so many small volcanoes; and when to the noise the thought is added that each blast may be carrying death to some poor workman of the thousands congregated there, the notes of the bugle have a peculiarly touching effect, and become like a call to prayer.

Close at hand to the Dinorwic quarry there is the hospital, where the wounded are cared for, and to which the dead are carried, for not once only during a summer's visit do we hear words such as these: "At eleven o'clock a poor fellow was killed opposite;" or, more haply, it may only be "A poor man has had his leg blown off." The people of the place tell you that they do not notice the blasting; but during a three-weeks visit I found but little difference, and when Saturday afternoon arrived I used to find myself wondering at the great

stillness, for then there is a half-holiday, when the workmen may clean themselves and prepare for the approaching Sabbath. And very beautifully is that Sabbath kept at Llanberis. The religion of the poor is for the most part Calvinistic-Methodist, and the observance of Sunday is that of a peaceful community gathered almost unanimously together for prayer and worship. I saw no drunken men, I heard no unseemly oaths, but three times each Sabbath I saw streams of tidily dressed men and women issue from the doors of a large chapel; and as I stood on the hillside I listened many a time to the deep sonorous voices sending up to heaven their simple hymn of praise.—
FELIX-FEMINA.

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.—A meeting was held at Chiswick, August 19th, to determine the merits of the bedding plants, chiefly Pelargoniums, sufficiently advanced for the purpose. Although many of them, from having been received as small plants, and owing to the unfavourable character of the season, were found not in a condition for a satisfactory conclusion being arrived at, there were others in better condition. Of these the following were awarded first-class certificates as Bedding Pelargoniums—viz., Madame Verle, free-blooming, fine shape, white, with delicately-tinted rosy pink eye; leaf zoned. Fairy Queen, a free and useful sort, with bright rosy crimson flowers and lobed leaves. Dr. Hogg, very showy, a semi-Nosegay, with large broad petals of a rosy crimson hue, the lower petals, especially in some stages, being more strongly suffused with rose. Sambo, dwarf compact habit, and faintly zoned leaves, the flowers rather small, but of a very rich crimson scarlet. Madame Martha Vincent, free-blooming good white, the white a little tinted, and the flowers in good trusses. Parity, free, and bearing good trusses, the flowers pure white. This and the foregoing are the two best of the many white-flowered sorts in the collection, the first having slightly the advantage in freeness and size of truss, and the latter in pureness of colour. Crystal Palace Gem, a large, red, and very showy flower with small white eye, something in the way of Roi d'Italie, and with dark zoned leaves. Lady Constance Grosvenor, a very effective flower, and probably the best, as far as yet developed, of the present season; the leaves are of a peculiarly lively green, and elegantly marked with a dark zone, and the flowers (of the Nosegay class), are of a very bright scarlet, and produced in large trusses; it is a decided beat upon Cybister. Violet Hill Nosegay, which had formerly been voted a second-class certificate, was now given a first; it is remarkably dwarf and compact, with a full head of salmon-red flowers, and has lobed leaves; and if a continuous bloomer, will make a pretty edging variety. Gloire de Nancy, with large plain green leaves, and rosy-tinted flowers, was selected for reward as the best of the double-flowered varieties yet obtainable. Rebecca, a semi-Nosegay, with zoned leaves and fine trusses of large rosy flowers, having glowing upper petals. Warrior, a strong-growing sort, with plain green leaves, and large trusses of finely-shaped bright scarlet flowers. Princess Alexandra, a silver variegated sort, of compact growth, with large flat leaves, broadly edged with white. Castle-milk, a white-edged variety, of rather erect free growth, with the leaves inclined to cup. Snowdrop, the counterpart of Princess Alexandra as to compactness and flatness of leaf, but with the broad margin of a creamy tint. Second-class certificates were given to the following:—Albion's Cliffs, a silver-edged, much in the way of Castlemilk, but more vigorous in growth, and somewhat less white in appearance; a good useful sort, nevertheless. Oberon Nosegay, with yellowish-green leaves, marked by a dull zone, and large scarlet semi-Nosegay flowers; it is bright in colour, but thin. Emily Merland, a zonate scarlet; Vulcan, a free-growing sort, with green lobed leaves, and semi-Nosegay flowers of a clear scarlet.

In addition to the foregoing, first-class certificates were given to Messrs E. G. Henderson & Son's Pyrethrum Golden Feather, and to Mr. Chater's dwarf, compact-growing, orange scarlet *Tropeolum*, called Advancer.

FRUIT AND VEGETABLE COMMITTEE.—This Committee met at Chiswick, likewise, on the 19th inst., for the purpose of examining the collection of Chasselas Grapes, Tomatoes, and Lettuce, in the garden. Their attention was more particularly directed to find out the various synonyms of the varieties, a work very suitable for the Committee, and one which is calculated to do an immense amount of good, every one feeling the great inconvenience and annoyance of the present multiplicity of names which every description of garden produce possesses.

Of the Chasselas Grapes, a collection had been grown, and fruited together in pots—the only way in which such a large number could be brought under comparison. The earliest variety is Chasselas Hâtif de Tonnain, a small, round, somewhat pointed, greenish white Grape; seeds transparent, sweet, and agreeable. Gelbe Muscateller, resembles this in appearance, but is somewhat later. Pitmaster White Cluster is very much like Gelbe Muscateller. Early White Malvasia—which is synonymous with Grove End Sweetwater, Keimheimer blanc précoce, Burchard's Amber Cluster, &c.—is a most excellent early, small, yellowish white Grape, juicy, sweet, and very agreeable. Royal Muscadine is a very excellent variety for pot-culture, and free-bearing.

The following are synonyms of it—viz., Chasselas Napoléon, Queen Victoria, Chasselas Moutanban à grains transparents, Chasselas de Fontainebleau, and Brutiano. Chasselas Croquant is somewhat firmer in the flesh. Chasselas de Florence is the same, only having a few rose-coloured berries in the bunch. Golden Bordeaux resembles the Royal Muscadine, but is smaller, and not so good. Ciotat is a Royal Muscadine, with Parsley-cut leaves. Muscat St. Laurent is a very early Grape; the bunches are small; berries small, sweet, with a muscat flavour. Muscat Ottonell and Oliver's are synonymous with it. Le Mamelon resembles it, but has much more deeply-cut leaves. Chasselas rose de Falloux is of the same flavour and character as Royal Muscadine, with bright rose-coloured berries. Muscat rouge, Chasselas rouge, Chasselas rose de Negrepont, and Fondante rose are synonyms, a little paler than Chasselas rose de Falloux. Stillward's Sweetwater is a very good variety of Sweetwater, berries large, and sets freely. Diamant Traube is a very fine Grape, bunches and berries large, of a clear transparency; flesh firm, juicy, and rich. Cabral resembles this very much, but is inferior to it. Reeves's Muscadine is a very strong-growing variety, berries small, beautifully yellow, rich, and pleasant. Chasselas Musqué is well known. Chasselas Musqué de Nantes, Muscat blanc de Berkheim, and Muscat Regnier are synonyms of it. Cranford Muscat is the same in flavour and appearance, but has the reputation of not cracking. Duchess of Buccleuch is a very long tapering bunch, small, round berries, in flavour like the Chasselas Musqué. Muscat Trovren is a fine Grape, bunches large, berries medium-sized, in flavour like Chasselas Musqué; it does not crack. Foster's White Seedling is a fine Grape, bunches large, berries large, clear, and beautiful oval; pleasant flavour. Chasselas de Jerusalem is Black Hamburgh. Millhand du Pradel is synonymous with Ceillade noir musqué and Ceillade noir précoce; a very excellent variety, berries large, oval, black, muscat flavour. Muscat noir d'Angers is synonymous with Muscat noir d'Eisenstadt, a good form of Black Frontignan. Muscat noir d'Heugrie is a small black Grape, with a very rich muscat flavour, the highest flavour of all the varieties grown. Chasselas Dahamel is a small, round, black Grape, not of high flavour. A Grape received from Sir P. De Malpas Grey Egerton is a small, oval, black variety, of no particular value. No. 65 (Veitch), is a small worthless variety of the Persian Grapes, reddish purple. Madeleine Royale is a fine variety, larger than the Royal Muscadine, ovate, clear, rich, and excellent.

Of the Tomatoes, a large collection of varieties had been procured from Messrs. Thorburn & Co., of New York, for comparison with our own English varieties. They have all been grown and fruited in pots under glass. They are very handsome and ornamental grown in this manner, the Cherry and small-fruited sorts making really beautiful decorative plants. The earliest variety is the Red Cherry, synonymous with the Cherry-formed; the fruits are round, red, and about the size of Cherries, borne in clusters of from six to ten fruit in great abundance, very handsome. The Yellow Cherry, syn. Small Yellow, is the same as the Red, with yellow fruits. Pear-formed, syn. Pear-shaped, has the fruits red, of the form of a small Pear, from 1½ to 2 inches in length, borne in clusters in great abundance, very handsome. Yellow Plum, syn. Plum-formed, has the fruits small, yellow, oval, in shape like a Damson, very handsome. Round Red, syn. Extra Early Red, and Sims's Mammoth, is a few days later; the fruits are red, roundish, ovate, smooth, about the size of a Washington Plum, prolific. Large Red Italian, syn. Orangefield, is the earliest of the large-fruited sorts; it is very dwarf and prolific, bearing fine fruit within 6 inches of the ground; the fruits are very large, red, corrugated or ribbed—an excellent variety. Grosse rouge hative is later than the Orangefield, and a stronger grower, a fine and true variety. Great Mammoth, syn. Large Red, has smaller and more finely cut leaves. Large Red Smooth is synonymous with Powell's Prolific. Filden is the same as Red Valencia Cluster, Lester's Perfected, New Giant, and Fiji Islands. It is a strong-growing variety, leaves deep green, late, and not so prolific as the others. Key's Early Prolific is a tall-growing variety; the leaves are much more entire and of a lighter shade than any of the others; fruit medium-sized, pale red, corrugated, later than Orangefield, very productive—a first-class variety. Large Yellow is the same as the Common Large Red, with yellow fruits. Tomato de Laye is synonymous with Grenier, Upright, or Tree Tomato; the plant is of stiff erect growth, will stand without stakes; leaves deep green; fruits large, slightly corrugated. It is very late, and not suited for cultivation in this country, excepting in warm seasons. The Whorleberry Tomato proved to be nothing else but *Solanum nigrum*, the noxious weed of our gardens.

Of Lettuces a very numerous collection was brought together; a great number of them, however, being only fit for winter use, could not properly be taken into consideration. Another trial will have to be made of the winter varieties. Those enumerated below are all fit for summer use.

Of Cos varieties the Paris White Cos is the best. Superb White Cos (Sutton), Green Paris Cos (Barr & Co.), and Giant White Cos are the same as this. Grey Paris and Beckland Green Cos are the same—a very large and excellent variety. Moorpark (Lee), is a very fine sort, large, and late in running to seed, pale green, and smoother than the Paris Cos. Lee's Hardy Cos is also a very fine variety, erect-growing, late. Magnum Bonum, which is the same as Florence Cos, Ivory's Nonsuch, White Brunoy, and Giant Green, is a very

large tall-growing variety; the leaves larger and smoother than the White Paris Cos; seed black. Egyptian Green Cos is a very erect-growing sort, of a deep green colour, runs to seed early; seeds black. Snow's Compact Cos resembles this; small, seeds black. Brown Cos, or Short's Defiance, is the same as Giant Brown Cos and Bath Cos; black-seeded—a very good variety for either winter or summer use, the dark colour being the only objection. Bath Cos (white seed), is the same as Giant Brown Cos (white seed), and Wheeler's Improved Cos. Holme Park (Stuart & Mein), is a small variety; leaves green tipped with brown, much twisted; black seed. Magdalena Cos is the same as Large French Cos and Monstrous Brown Cos, a tall, large-leaved variety, tinged with brown, rather loose and coarse; seeds black. The Spotted Cos, Improved Spotted Cos, White and Black-seeded are more curious than anything else.

Of Cabbage Lettuces the best is Neapolitan, which is very large; leaves green, much curled, crisp and excellent. Drumhead, which is the same as Malta, resembles the Neapolitan; it is of a lighter green, taller, and with a smaller heart. Early Simpson and Crisped German are dwarf and more curled varieties of the Drumhead. Hooper's Incomparable, White Batavian or Silesian, Prince Albert, and Early Silesia are the same as the Red-edged Drumhead. Hardy Hammersmith (Stuart & Mein), from Australia, is Neapolitan. Lettuces, curled like Endive, two varieties, are of no account. Brown Batavian or Silesian is the same as Marseilles, in character like Drumhead, of a dark brown colour. Large Spotted Cabbage, Spotted Large Cabbage, white and black-seeded, are not of any use. Berlin White Summer (black seed), is an excellent variety, smooth, oily-leaved; hearts firm, large, sweet. Royal or White Summer Peripigon (Stuart & Mein's No. 1), Berlin King's Head, Branzul, and Prince's Head, all resemble this, but have the seeds white, and are not quite so good. Imperial Large Cabbage (Stuart & Mein), Trienter (Barr and Sugden), No. 2 (Stuart & Mein), and Green Spring, are all very much alike—a large, rather late, smooth, oily-leaved variety, white-seeded. Imperial Cabbage (Barr & Sugden), is a very large and late variety. It is the same as Large Winter or Madeira, Large Normandy, Short's Globe, and Mogul Large Yellow. Turkish or Batter is somewhat smaller, and has the seeds black. Switzerland, Large Versailles, Pas de Calais, and Winter Lettuce (Barr & Sugden), are nearly allied to the Hammersmith, and more suited for winter. Large Green (Barr), resembles this, but is slightly spotted, and the seeds are black. Stonehead Frame, White Stone, Crisped Small Early, Asiatic, and Victoria Cabbage are very similar, small, firm, white-hearted. Tennis Ball and Stone Tennis Ball, black-seeded, are very similar to the foregoing. Brussels Early, Small Berlin, George's Early White Spring, and Small Cutting are nearly allied, only fit for cutting in a young state. Red-edged Victoria is the same as Brown Genoa, Snedeshed, and Large Brown Best, seeds black, compact, leaves smooth, with a brown tinge, and a few brown spots. Monsseonne resembles this, but the leaves are more curled and crisped. Brown Dutch, white seed, is the same as Bigotte. Emperor's Head, Brown Winter, Ne Plus Ultra are the same, with black seed. Blood Red, black seed, is somewhat darker. The Artichoke-leaved has leaves cut like an Artichoke, of a brownish tinge. It is a very good summer Lettuce. Spinach, or Oak-leaved, has the leaves cut like the Oak or Artichoke, of a pale green colour.

CALCEOLARIA FAILURES.

As the subject of Calceolarias failing when bedded out is being discussed, and having myself been a sufferer to a slight extent, I beg to offer a few remarks.

When taking the plants out of the cutting-bed in spring, I noticed some having mildew on the stems, and which seemed not very healthy, but, being scarce of plants, I nursed these, and some of them did well enough. They were afterwards planted out side by side with other healthy plants which had not been touched with mildew. I watched their progress keenly and found my losses to occur amongst the mildewed lot. Do you think this likely to be the origin of the failures?—ROUNDHILL, Belfast.

[We forwarded the foregoing communication to a correspondent whose Calceolarias, we knew, had proved most unsatisfactory this year, and he has sent the following remarks:—

"The view of the evil taken by 'ROUNDHILL' is not by any means an unlikely one, although on a cursory inspection of a number of plants that have either died or are dragging on a wretched existence, I do not find sufficient traces of mildew to account for their going off, and in my case I should be inclined to think the mildew was the effect rather than the cause of the disease. In four long rows of Calceolarias, each containing upwards of six hundred plants, the deaths have been very numerous. Certainly more than one-third of the plants have either died or present a sort of withered blackened cluster of leaves that will never come to anything, while the somewhat irregular manner in which they have gone off, proves that disease rather than atmospheric causes led to their failure.

As it sometimes happens that eight or ten plants have died together, and then a few healthy ones are to be met with, I have been led to think that the constitutional vigour of the variety must be wearing out, and the mere fact that older varieties are less prone to this disorder is no proof against this surmise, as all might not have been possessed of the same constitutional strength to start with. I fear that we must look to new varieties of *Calceolarias* to take the place of those going off. It would, however, be well if those who have suffered in this way in past years would record their experience, the more so if their plants are recovering. I have escaped almost without losing a plant until this season, when my *Calceolarias* present a sad spectacle, and I am looking out for a substitute. The dwarf *Calceolaria*, Cloth of Gold, does not promise much as it is so uneven in its growth and so uncertain in other respects. The yellow variety which with me has been least affected, is that called *Viscosissima*, but I am not certain that it is exempt.

"I may add, that last autumn, by way of endeavouring to throw fresh vigour into the *Calceolaria*, I obtained a number of cuttings from a distance of upwards of one hundred miles, and from a soil of an opposite character, thinking the change might be beneficial. In this I have been disappointed, for if the plants struck from cuttings from a distance are not really worse than those propagated from home cuttings, they are quite as bad. Both were subjected to the same winter-treatment, the cuttings being put into a cold-pit in rows about 3 inches by 2 inches apart, and about the beginning of April one half the rows were taken up and replanted in a sheltered spot on a bed of leaf mould and other light soil, and the others remained till the middle of May, when both were planted out with as good balls as could be obtained. For each the protection during winter was very slight, and pots have not been used for many years.

"The failure of *Calceolarias* would seem to call for inquiry in several directions. First, has any one after a severe attack one year found his plants of the same kind healthy the next? Secondly, has any one found a second variety to escape where one had failed before? and thirdly, what varieties seem to escape altogether. With me *Calceolaria amplexicaulis* has not been attacked as yet, but its flowering so late precludes it from occupying the place of dwaffer kinds.—J. R."]

I would recommend your correspondent "M. F." to try *Calceolaria pinnata*. I was very short of the shrubby class of *Calceolarias* a few years ago; and *C. pinnata* resembled the shrubby sorts so much, that one did not know the difference without going close to the plants. How they will do with your correspondent is another question, for I never saw them succeed so well as they do in Wales, and I think the secret lies more in the moist atmosphere than the soil.

Calceolaria pinnata is easily raised from seed; and if sown in good time and potted in small pots, so as to form good stout plants by bedding-out time, I do not think "M. F." will be disappointed with them.

I am glad to state that the shrubby *Calceolarias* this year are as fine here as usual, a single plant measuring 2 feet in circumference; but whether they are or would be proof against the disease they are very subject to in dry places, I cannot affirm.

They are here very shy of starting when first bedded out, if the weather is at all dry, and become infested with the green fly. My plan is to give them a dusting of sulphur while they are damp with the dew, and afterwards a good syringing with water three or four times a-week, which never fails to restore the plant.—T. ELCOMB, *Rhug Gardens, Corwen, North Wales.*

In answer to "M. F.," we grow *Aurea floribunda*, Prince of Orange, and Victor Emmanuel by the hundred, and we have not lost one plant in the hundred. Our soil is a sandy loam with a red sandstone rock bottom. I put about half a barrow-load of very rotten stable-manure to about every square yard of ground. The plants are better this year than I have ever seen them before, owing, I believe, to the extra manure which I gave them.

I put in the cuttings about the first week in October, and I keep them in the cutting-pots until February. I then pot them and keep them growing until bedding-out time. If the

weather be dry after planting I water them well for about the first fortnight.—A CHESHIRE GARDENER.

BRIAR VERSUS MANETTI STOCKS.

"ANYTHING about Roses?" is an inquiry with many on opening your Journal. There is likely to be a good deal, if the Briar versus Manetti question is to be fully gone into. It is just one of those where prudent people remark, that "There is much to be said on both sides." Last winter is the strongest argument I have heard on the Manetti side. If such seasons are to be expected it is of very little use budding Roses on high standards. It would be difficult to reckon up the number of Briar stocks that must have perished. On the other hand, as far as my experience has gone, the Manetti is more difficult and uncomfortable to bud than the Briar, and the stocks are not ready until later in the season. It is also a snare and delusion to the uninitiated. I have more than once found a huge bush of Manetti being tenderly cherished as one of the last new Roses, and heard the innocent owner wonder why his Rose was so different that year from what it was when he bought it; or else console himself for want of flowers with the strength of the branches! Where people are not prepared for this, the Rose is often smothered by the too vigorous parent. I cannot but think that, after the experience of last winter, it will be well to pay more attention to growing Roses on their own roots, and that with Teas in the open air this will become almost indispensable.—A. C.

As I have lately (August 20th), visited my friend Mr. Radclyffe at Rose Hill, Okeford Fitzpaine, I may be perhaps permitted to bear my testimony to the truthfulness of his statements with regard to the value of Manetti as a stock, its excellence, and its endurance. I have already this season spoken of his Roses in their summer aspect. I have now seen them in their autumn gear, and never before saw more thoroughly realised the title of Hybrid Perpetual, for many of his trees were one sheet of bloom, and young and vigorous shoots were pushing away with young bloom-buds formed on them and ready to expand their beauties shortly. As I have already explained, this is done not without much care and trouble—manure applied copiously, and water still more so. This in a dry season is, I am persuaded, the sheet-anchor of Rose-growing, both roots and foliage to be well soaked; and if they have been supplied with manure well, the orange fungus will, I believe, be very soon beaten out of the field by the process. As to white mildew, I saw that effectually stopped by the application of blue vitriol, two ounces to the bucket of water. The plants were watered with this, and the mildew clean burned out. The leaves were browned by the process, but the further progress of the disease was stayed. It was a great pleasure, although dashed with the thought how differently my own looked, to go round the plants and see the beautiful healthy foliage and the vigorous shoots which they were making, and this on ground no way remarkable as Rose ground.

It has been questioned whether the Manetti is a permanent stock. Mr. Radclyffe has some Roses (notably six of *Acidalies*), budded fourteen years, and now making as vigorous growth as if in the very flower of youth. Surely this is a proof that on some soils, at any rate, Manetti does not die out readily.

Mr. Cant, I see, urges Rose-growers not to be carried away by Mr. Radclyffe's enthusiasm about Manetti. Well, I think my friend would grant Mr. Cant all he asks—viz., that on Rose ground such as his the Briar will do wonders; but, then, how few have such ground! I know it well, as I do the Hertfordshire loam, Mr. Turner's, of Slough, Mr. Tiley's, of Bath, and some others; but, then, we sigh in vain for such land, and therefore for ninety out of a hundred I believe Manetti well done to be the stock. For myself, I candidly say, after seeing my friend, I have never given it a fair trial; but I intend to do so this next season, and try to beat out the orange fungus, which has hitherto beaten me.

I should say that Mr. Radclyffe exhibited last week at Blandford 118 trusses of Roses, taking the first prize, and, I hear, exhibiting an uncommonly fine lot of flowers. He has mentioned lately the fact of his removing Roses in August. I saw the 228 which he had planted. The foliage had of course all dropped, but the wood was plump and healthy-looking, and I had no doubt that very soon the buds would begin to work. I saw also—let Mr. Flitton please take note of this—a *Maréchal Niel* with ten good buds on it. I have one plant myself with

several on it. And I would again say that, although some may differ from Mr. Radclyffe in his judgment on Roses, I think there is no one who, seeing his collection, can refuse to accord him the merit of being of our very first rosarians.—D., *Deat.*

NOTES AND GLEANINGS.

It has at length been definitively settled that the Show of Variegated Zonal Pelargoniums proposed by Mr. Wills, page 63, shall take place at the Royal Horticultural Society's meeting on September 17th. It will be remembered that Mr. Wills suggested a subscription to be commenced among nurserymen and raisers of new varieties, and offered to become a contributor himself. Mr. Turner, of Slough, Messrs. Downie and Co., Mr. Mann, of Brentwood, Messrs. Garaway & Co., of Bristol, Messrs. Carter & Co., Messrs. Perkins & Sons, of Coventry, Mr. Bull, and Messrs. E. G. Henderson having likewise signified their intention of contributing liberally, the amount hitherto raised has been apportioned as follows:—

1. The best 6 Variegated Zonal Pelargoniums, not yet in commerce, seedling plants excluded, one of each, 50s., 30s.
2. The best 6 Gold and Bronze Zonal Pelargoniums, do., do., do., 50s., 30s.
3. The best 3 Variegated Zonal Pelargoniums, do., do., do., 30s., 20s., 15s.
4. The best 3 Gold and Bronze Zonal Pelargoniums, do., do., do., 30s., 20s., 15s.
5. The best 6 Variegated Zonal Pelargonium (golden or silver), not in commerce, the seedling plant excluded, 20s., 15s., 10s.
6. The best 6 Gold and Bronze Zonal Pelargoniums, do., do., do., 20s., 15s., 10s.
7. The best 6 Golden Self Pelargonium, do., do., do., 20s., 15s., 10s.
8. The best 6 Variegated Zonal Pelargonium, in commerce, two plants of the variety to be shown, 20s., 15s., 10s.

If, however, further subscriptions should come in some modifications in the above classes may be adopted, such as restricting Class 5 to Golden Zonals, and adding a class for Silver Zonals, and one for Nosegay Pelargoniums in flower, to be sent out next spring. The prizes in the above classes are to be open to all comers communicating to Mr. Moore, not later than Saturday, September 14th, their intention to exhibit; and the whole of the varieties shown will also be eligible for certificates from the Floral Committee, at whose meeting on the 3rd September censors are to be appointed.

— THE Floral Committee, at its last meeting, arrived at the conclusion that new Roses shall date from the year in which they are actually put into commerce. This will prevent much confusion for the future, although contrary to the present custom of growers, who date from the year in which blooms are exhibited in this country, and which it is almost impossible in some cases to ascertain with certainty. Now, a Rose sent out any time this year will be considered a Rose of 1867.

— On the 26th inst., the late Prince Albert's birthday, when, by Her Majesty's desire, the Royal Horticultural Society's Gardens at South Kensington were open free, no less than 104,599 persons availed themselves of the privilege, and but for the unfavourable character of the day the number would, doubtless, have been much larger.

— The following Floral and Horticultural societies announce their intention to hold exhibitions next month—viz.,

Sept. 3rd	Bicester
"	Middleborough
4th	Mauchline, N.B.
"	Undercliff (Isle of Wight)
5th	Alton (Staffordshire)
"	Winchester
"	Harrogate
"	Royal Oxfordshire
5th and 6th	Workshop
"	Louth
10th	Erewash Valley (Alfreton)
11th	Bildeston District (Lpswich)
"	Eye
"	Faversham
"	Nottingham
"	Wrexham
11th and 12th	Borough of Tynemouth
12th	Thame
13th	Leslie, N.B.
"	Eury St. Edmunds
14th	Denny and Dunnipace
17th and 18th	Warwickshire
19th	Wainfleet
20th	Belfast

WORK FOR THE WEEK.

KITCHEN GARDEN.

EVERY attention should at this period be paid to the high cultivation of winter crops. Where sufficient labour is provided at all times not a weed should be allowed to show its

head. Where, unfortunately, they have done so through press-ure of business, I would strongly advise the use of the spade instead of the hoe. This plan is generally considered the best; besides, it is as economical in the first instance, excepting in very hot and dry weather, for unless the hoeing is succeeded by a raking (a double operation), the hoeing will in general have little effect. Moreover, the benefit in the way of admitting air to the soil is very considerable, especially in effete soils, such as are those in the majority of kitchen gardens. All the Brassica tribe, from the York Cabbage up to the Cauliflower, should be soiled up the stem as high as possible. Where such crops are on poor land, a dressing of guano at this period would be of eminent service. It might be introduced, as in South America in the cultivation of Tobacco, Indian Corn, &c.—viz., by hand, around the stems of the plants. I would advise the mixing of it with four times its bulk of dry old tan, sawdust, charcoal dust, or anything which will duly separate its particles. This process should, of course, precede the soiling. Where plants of the Cabbage tribe are liable to "club," this course will be found of much service, as such frequently depend for their existence on the few late-made surface roots. Cabbages, continue to plant out. Celery, earth-up the earliest crops, previously removing all suckers. Endive, late plantings must be made forthwith; this planting will be eligible to move with balls of earth into frames in November; the soil must be very rich. Leeks, a most useful vegetable in a variety of ways, should now be soiled-up, after the manner of Broccoli; a dressing of guano may be introduced previously if the soil is not sufficiently rich. Lettuce, this is an excellent time to make a sowing of the Brown or Bath Cos and Hardy Hammer-smith, to remain where sown through the winter. The beds should be elevated considerably, the higher the better, and the seed scattered broadcast rather thinly. Onions sow, and attend to the taking up and storing the main crops; these, when the stems and roots are withered, should be taken under cover, and in wet days picked and sorted according to size and quality. They keep best in a dry, cool, and dark place, for they are still living vegetables, and as such cannot be unaffected by light. Spinach, the latest sowing for spring use should now be made. Tomatoes, if they are over-luxuriant cut away a portion of their roots.

FRUIT GARDEN.

As soon as the fruit of Peach and Nectarine trees have been gathered a portion of the shoots that have borne fruit may be cut out, in order to allow more space for the shoots of the present year's growth intended for bearing next season. In doing this it is not advisable to cut out all that will ultimately require to be removed, for such would occasion too great a deprivation of foliage. The most naked of the shoots that have borne fruit should be first dispensed with, the succession shoots can be trained in their place, and the trees should be well syringed. Leaves that are preventing the fruit from ripening should be put aside, but no further than is absolutely necessary, and so that their upper surface may still face the light. Cut out the old wood from Raspberry plants, leaving only about six of the strongest shoots of this year's growth. The old Strawberry-rows should now have attention; the leaves of the runners will shade the principal leaves of the mother plant. It is a good practice to mow down the runners right and left, in order to throw sunlight on the leaves of those left. The mowing down the old plants is a most absurd process, which some still adhere to.

FLOWER GARDEN.

Pinks which have bloomed the second season should be removed from the borders if there is a sufficient stock of young plants to replace them; if not, some of the best old plants should be cut closely back; they will break again and make fine, healthy plants for next year. Many kinds of plants are now ripening their seeds, which should be carefully collected in dry weather, and laid by for storing and cleaning at a more convenient time when out-door work cannot be proceeded with. The leaves of trees being now beginning to fall, more attention must be paid to sweeping and cleaning walks, lawns, &c. The decay of some of the earlier flowers will now begin to leave blanks, which will not be easily filled unless a stock of large plants in pots has been provided. In mixed beds some of the late Phloxes, Asters, &c., may occasionally be untied, and made to occupy three or more sticks in order to fill the blanks. Petunias and other mass plants of gross habit should have a pruning betimes to keep them within bounds. A few Crocuses, Snowdrops, &c., may be planted soon to obtain an early bloom.

GREENHOUSE AND CONSERVATORY.

Continue to look over climbers, borders, &c. Large specimens which had been removed out of doors to give room will soon require moving back to these structures; indeed, during the whole month of September, attention to this matter will be occasionally necessary. The earthworm is a greater enemy in general to pot plants than low temperature; every precaution must be taken to avoid its depredations. In the mixed greenhouse look well after late-flowering plants. The late *Heliotropes*, *Scarlet Pelargoniums*, *Petunias*, &c., if preceded with as recommended weeks since, will now be somewhat pot-boned, and will in that state, with the application of weak liquid manure, produce abundance of bloom on a light shelf until the beginning of December. *Lachenalias* should be instantly repotted; and the *Persian Cyclamens*, if planted out as recommended in spring, will now be fine bushy plants full of young leaves. They must be taken up forthwith with all the soil possible, potted carefully, and placed in a close frame or propagating-house. A bottom heat of 75° with a very moderate atmospheric temperature would be an advantage. After three weeks of this treatment they may be introduced into the greenhouse, where they will produce their fragrant blossoms in abundance from November till April. The different kinds of shading on plant-houses and pits may now be removed, especially as we have had little bright sunshine during summer. Light is now more than usually important to elaborate and consolidate the juices before the winter arrives, for unless every means is taken to accomplish this, we may expect sad failures during the next winter among our tender and more valuable exotics. To protect them from rain and to expose them to light should now more than ever be our earnest study in regard to choice specimens, especially those which have been recently shifted, and which are in vigorous growth. *Pelargoniums* intended for specimens should have their wood well ripened by thorough exposure to sun and air; their strength will thereby be husbanded, and their constitution improved by this practice. The foliage will not be so likely to damp off during winter, and they will thus be better prepared for their spring work. Now that dry weather has set in we should immediately turn our attention to the compost-yard; this on no account should be neglected, for it is the magazine that must supply the principal munitions of gardening, and it is always best to obtain loam, peat, and all kinds of composts in a dry mellow state.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Slugs and Snails.—From several quarters we hear sad accounts of the ravages of slugs and snails this season. Some gardeners, hitherto distinguished for their fine quarters of vegetables, are quite at a loss, for nothing will grow freely. One of the most successful, generally, that we know says the numbers of slugs were quite unprecedented, and even now they seem not much thinned, though he picked them up in pecks, with a lantern at night, and was out again early in the morning using brewers' grains as traps, and lime and soot sprinklings, with but little avail. We did not, however, notice a single blackbird or thrush about the place, though informed that they, too, made their appearance. We began to think, though we had our share of slugs, that the less quantity with us might be greatly owing to the numbers of these larger birds. In dull mornings we noticed they preferred the fresh-stirred soil and what they found there, to Currants and Raspberries. One morning lately, at four o'clock, we saw six fine cock blackbirds walk up and down every row of a fresh-planted piece of Lettuce, and making short work of every moderate-sized mollusc. The same morning we noticed a family of tomtits twittering and peering with their little eyes and heads under almost every leaf on a Peach wall. We have hitherto had too much of the feathered families, but we might fare worse if we had none at all.

There being such a number of slugs is rather perplexing after such a winter, when the frost at times was so severe as to be too much for such pests if near the surface; so our old men say; but, then, we never recollect meeting with a snail killed by frost. They must either endure it, or go beyond its reach. On one subject we should like to have our opinions confirmed or completely disproved. Thinking that a severe frost does something to thin snails, as well as birds, we have come to the conclusion, from repeated observation, that undug ground is most inimical to the slug in severe winters. So much do we believe

this to be the case, that, but for other practical and cultural considerations, we would prefer the ground to be well frosted, before, on its thawing again, we would trench or ridge it. We certainly should like to do this with a piece of ground peculiarly slug-infested in summer. Our readers are aware that on such smooth-surfaced ground the frost will penetrate much more deeply than in that which is rough and open from ridging and trenching. Do our most severe frosts, however, actually kill the slug and snail? and that we would like the experience of others to decide, otherwise it would be of no use waiting for the undug soil to be frosted. We can only say we think that when we have had a piece of ground slug-infested one year, having the surface well frosted before turning it down by trenching or ridging, afforded comparative freedom from such visitors next season; but then that might be only a thought—a mere coincidence instead of a result from the supposed cause. Even as such it may be worth trying by those who have had an unusual number of these slimy devourers this season.

Wasps.—We directed attention to these quite soon enough; for, writing on the Saturday evening, we had quite a cloud of them on the Monday, but very small and weak, yet such an inroad did they make on Cherries, that we were forced to gather Florence and other kinds, though not ripe, as not one would have been left untouched. We began to be alarmed for Plums, Peaches, and Apricots, and collected a lot of common bottles supplied with stale beer, and bruised faulty fruit, to entice them to go there for refreshment, instead of to our ripening fruit, and a goodly number of them kindly drowned themselves. We were thinking of setting up our hand-light traps—referred to in previous volumes—when the storm of Monday and the rains of Tuesday week again cleared us from them, but for how long it would be impossible to say. Besides trapping and killing, thin muslin or Nottingham lace netting will prove the most effectual protection, and for single fruit, as Peaches, a very thin coating of cotton wadding fastened round them. If done thinly and neatly this will not much injure either colour or flavour, and the wasps will not venture on the dry woolly matter; and if wet they are less likely to be moving about. These unwelcome insects can fly but little when their wings are wet, and this we have several times taken advantage of in clearing them from a fruit tree by a free use of the syringe or engine over the tree and fruit, and another person ready with a spade or flat trowel to settle them on the ground as soon as they dropped. We have had few nests in our neighbourhood this season.

Potatoes.—As we dreaded, the wet and the heat combined brought on the disease, and in a virulent form. A fine piece left undug proved a most wonderful crop, fine tubers, and so plentiful that the ground could scarcely hold them when turned out, but more than half are tainted, and we fear that most of these which appear sound now will go. Until this incomprehensible disease shall leave us, the only lesson to be learned as yet, so far as our observation and experience go, is to plant only early kinds, and no great quantity of them in small confined gardens, and to have the chief crops grown in open fields, in well tilled, open, but not ever-rich land. In most small gardens where the ground is continuously cropped, this continuous cropping at length makes the soil too rich for Potatoes, for it is of no use to try constant cropping without manuring. In small gardens, too, no great open space can be given to Potatoes, but every few yards there must be a row of Peas or something tall, which confines the sweep of the air, already too confined in dull, sultry, close, damp weather. We have noticed that Potatoes in close cottage gardens, near the cottage, proved almost wholly unsound, whilst at no great distance those grown in a field of allotments would mostly escape, and in the same district those grown in open fields, and in well-tilled soil, scarcely at all manured, escaped almost altogether. Again, as a general result of observation and inquiry, it appeared that Potatoes grown in fields, ridged up in the old-fashioned way, were more exempt from the disease than those grown on the flat, where they were more subject to be thoroughly moistened in the ground, than those earthed-up in the old way. The frequency of the disease in close, hard-cropped gardens, may lead to relieving such gardens, by growing the principal crop of Potatoes in the open field, a plan which also might well be followed with Turnips, Carrots, Parsnips, and Beet, all of which would be richer and sweeter if grown every year on fresh soil, an approach to which in an old garden can only be given by trenching. It is quite mournful to witness the effects of the Potato disease in cottage gardens.

FRUIT DEPARTMENT.

We have here been chiefly engaged in potting Strawberries for forcing, and we use chiefly what are called 40 and 32-sized pots. To save the trouble of layering, we took off runners of almost as many as we would want, pricked them in a bed, covered with old sashes, or other protection to shade, and took them up when tolerably well rooted, and potted. In potting, the chief points to be considered, are rather stiff loam slightly enriched with rotten dung, keeping the plant well up, so that the crown may be nearly level with the rim of the pot, and then firming the soil well with the fingers and a round piece of wood as a rammer, watering, shading for a few days, and then giving all the sunlight possible. The plant will sink a little lower in the pot by degrees. The exposing the crown well is a matter of first importance as respects fertility.

ORNAMENTAL DEPARTMENT.

Routine as to keeping and general management much the same as usual. Commenced propagating in earnest for the flower garden next season, turning attention in the first place to Heliotropes, Verbenas, Lobelias, and similar plants, and following with the rarer, and then the more common of the bedding Pelargoniums. What are put in now will need no artificial heat, and most plants ultimately succeed best without it. Verbenas, Heliotropes, Ageratums, Cupheas, &c., give least trouble when they can be set in a cold frame or pit, some 18 or 24 inches from the glass, as then, kept close during the day, with a skiff from the syringe, they will require only a minimum of attention in the way of shading and watering. All such plants as Scarlet Pelargoniums, that have succulent shoots, require much less attention, but even they will succeed quite as well now, if not fully exposed to a bright sun, though in their case shading is of less consequence, because the flagging of the leaves is of little importance, so long as the stems are not shrivelled. With respect to such plants as Verbenas, the general rule holds good, that a cutting will all the sooner become a healthy plant, if the leaves left upon it are never allowed to flag, and yet the substance of the cutting itself is never saturated with water. The more sun now such cuttings stand without flinching, the sooner will they strike root, and the more healthy and robust will the young plants be.

After this season all cuttings may as well be put in pots, pans, and boxes at once, to prevent the necessity of future lifting and planting. As to the size of the pots, those from 4 to 6 inches in diameter are very useful for the smaller subjects, and from 8 to 10 inches in diameter for the larger kinds of Pelargoniums, and, as a general rule, 1 inch apart is not a bad distance for all the smaller cuttings. Many, however, who have room, prefer potting a strong Pelargonium cutting in a 3½ or 4-inch pot at once, and these will ultimately make the best plants with least trouble.

Where many plants are wanted, and there is little room to spare in winter, the store-pot or box-system must be resorted to, so as to keep as many as possible in little room. Good serviceable boxes may be roughly made, 3 feet long, 9 to 12 inches wide, and from 3½ to 4½ inches deep. There is no necessity for great depth, as the plants do no better, and the boxes are much more difficult to move. Such boxes require little drainage, and if the sides do not fit accurately, the boxes will need no holes to weaken the bottoms.

A few simple precautions are next to essential to success.

1st, The pots should be washed clean, and so might the boxes if planned or painted. We generally use ours in the rough, and if washed at all, we also whitewash them with quicklime inside and outside, and that greatly prevents fungus growing in the boxes in damp weather.

2nd, The soil should be light and sandy—if very strong loam, plenty of sand added, and only a very little of sweet, thoroughly decayed leaf mould. Half-rotten leaf mould should never be used even for drainage, as it is so apt to throw up fungus. The soil should be of two or three degrees of fineness, the roughest over the drainage, the next coarsest over that, and then the finest, followed by a sprinkling of sand. Large pots may be nearly half-filled with rough drainage; shallow boxes will need little drainage. We prefer all such pots and boxes to be watered a day or so before being used, so as to be nice and dryish on the surface when inserting the cuttings with a dibber; and then there is no necessity for deluging the pots when the cuttings are inserted, a matter of importance with succulent and tender subjects. Enough water to make all smooth and settle the cuttings will then be sufficient, as you know there is moisture enough beneath.

3rd, In choosing the cuttings, though any part will grow, it

is best to select the rather firm side shoots instead of those stronger terminal ones, and if taken off close to the older shoot all the better, as the bottom of the cutting will be harder and more mature, and if it does not strike so soon, it will go safer through the striking process and be less liable to the contingencies of damping, &c. It is as well to cut the base of the cutting clean through at a joint, or just where it came from the main stem, remove a few of the lower leaves, and lessen some of the greater ones, to diminish the evaporating surface. The leaf question lies in a nutshell. The more leaves a cutting has the sooner it will strike, if by your care in sprinkling and shading, and yet giving all light that will not injure, you prevent these leaves from flagging. The more leaves left on a cutting the sooner will the cutting be exhausted by these leaves flagging, if such care as stated above be not given. A compromise of the matter, therefore, as to the number of the leaves, lessens the requisite care, and yet insures success. One of the most common errors in striking tender plants is not the shading from the sun, but the forgetting to remove that shading the moment it is not required. Such useless shade tempts the cutting to expend its resources in lengthening upwards instead of rooting downwards.—R. F.

COVENT GARDEN MARKET.—AUGUST 28.

We have experienced a considerable decline in the quantity of first-class produce offered during the past week, which is partly owing, no doubt, to the local markets having a better class of customers at this season. Pears consist of Bon Chrétien, Jargonelle, Beurré d'Amanlis, Apples of Jonneting, Kerry Pippin, and Nonsuch. The arrivals of Potatoes are heavy, and there are several reports of the blight showing itself in fresh places.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	1	6	Melons each	3	0	5	0
Apricots doz	2	0	4	0	Nectarines doz.	4	0	8	0
Cherries lb.	0	0	0	0	Oranges 100	8	0	14	8
Chestnuts bush.	0	0	0	0	Peaches doz.	4	0	8	0
Currants ½ sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black do.	0	0	0	0	Pine Apples lb.	4	0	0	0
Figs doz.	2	0	3	0	Plums ½ sieve	2	6	5	0
Filberts lb.	1	0	0	0	Quinces doz.	0	0	0	0
Cobs lb.	0	0	0	0	Raspberries lb.	0	9	1	0
Gooseberries .. quart	0	0	0	0	Strawberries lb.	0	0	0	0
Grapes, Hothouse.. lb.	1	6	4	0	Walnuts bush.	10	0	20	0
Lemons 100	8	0	12	0	Green per 100	0	0	0	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	3	0	6	Leeks bunch	0	8	0	0
Asparagus bundle	0	0	0	0	Lettuce per score	1	0	1	6
Beans, Kidney, ½ sieve	2	0	3	6	Mushrooms ... pottle	2	0	3	0
Scarlet Run. ½ sieve	3	0	3	6	Mustd. & Cress, punnet	0	2	0	0
Beet, Red doz.	2	0	3	0	Onions .per doz. bchs.	5	0	0	0
Broccoli bundle	1	0	2	0	Parsnips per sieve	3	0	0	0
Brns. Sprouts ½ sieve	0	0	0	0	Parsnips doz.	0	9	1	0
Cabbage doz.	1	0	1	6	Peas per quart	0	6	1	0
Capsicums 100	3	0	3	0	Potatoes bushel	2	0	4	0
Carrots bunch	0	6	0	8	Kidney do.	3	0	4	0
Cauliflower doz.	2	0	4	0	Radishes doz. bunches	0	9	1	0
Celery bundle	1	0	2	0	Rhubarb bundle	0	0	0	0
Cucumbers each	0	4	0	8	Savoy doz.	0	0	0	0
pickling doz.	2	0	0	0	Sea-kale basket	0	0	0	0
Endive doz.	2	0	0	0	Shallots lb.	0	8	0	9
Fennel bunch	0	3	0	0	Spinach bushel	2	0	3	0
Garlic lb.	0	8	1	0	Tomatoes per doz.	2	0	3	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	0	0
Horseradish .. bundle	2	6	4	0	Vegetable Marrows, dz.	1	0	2	0

TRADE CATALOGUES RECEIVED.

J. Veitch & Sons, Royal Exotic Nursery, King's Road, Chelsea, London, S.W.—*Descriptive Fruit Catalogue, 1886-87.*

List of Strawberries, Bulb Catalogue for 1887.

William Paul, Paul's Nurseries, Waltham Cross, London, N.—*Bulb Catalogue for 1887.*

Dreghorn & Aitken, Kilmarnock, N.B.—*Catalogue of Bulbs.*

TO CORRESPONDENTS.

N.B.—Many questions must remain unanswered until next week.

CALCEOLARIAS (*A Somersetshire Lady*).—What is more particularly desired is to know the causes of failure.

SPOT IN GRAPES (*W. B. C.*).—Refer to our answers to correspondents last week, and you will see your case stated. (*Constant Reader*).—We have little doubt that the evil arises from the same causes as in the cases above referred to. (*H.*)—It is the same with your Grapes as with the above. If you send your plan and it appear good we shall publish it.

VINE LEAVES SPOTTED (E. B.).—The Vine leaf is spotted chiefly by scalding, the result of condensed moisture, and the sun striking the house before air was given. The spotting on the Cucumber leaf is partly the result of the same cause, but though none are visible on the leaf sent, we have no doubt they have also been attacked by thrips—a small loush insect that will jump as you approach it. Smoking, and syringing afterwards with weak, clear soap water, are the chief remedies. If all the leaves are like the sample, the best plan would be to destroy the plants, clean the place, and plant afresh.

VINE LEAVES SCORCHED—MELON LEAVES CURLING UP.—See answer to E. B. We think it very likely that you have both thrips and red spider on the Melons. It has been very difficult to keep the latter clean this season, as the changes have been extreme, from shade to bright sun. The thrips when full grown will be fully a quarter of an inch long, and of no greater width than the hair stroke of a pen; it is whitish at first, and turns of a darker colour. Nothing does more mischief, and hardly any insect is worse to eradicate, as fresh broods come when you have killed the oldest. In the early part of the season we found it a good plan to catch them on the leaf with a wet finger or a piece of wet sponge. The Vines were injured by the heat, and chiefly because, as we think, air had not been given early enough. On such days we threw whitened water over some of our houses with a syringe.

MYOPORIUM TENUIFOLIUM (Mrs. M.).—This we do not know; but unless it is a new introduction we suspect you have *Myoporum parvifolium*, a small, neat, evergreen shrub, a native of New Holland, and producing its white flowers in spring and early summer. Very probably the plant was none the better of its journey from Paris. At any rate, we should have expected it to stop flowering by this time. The something would be right or wrong according to circumstances. To recover it from its drooping state, make sure that the roots are damp, and keep the plant for a few days in a cool shady place. It will do in such a place out of doors from June to October. It requires a greenhouse or pit in the other months of the year. Sandy loam and a little peat or heath soil will answer for it.

CUTTING DOWN A LAUREL HEDGE (H. T.).—The Laurel hedge, which has been much neglected, and has grown very high, may now have any very long irregular growths cut in, but not to any great extent at this season, the main cutting being deferred until the beginning of next April, when the whole of the branches should be reduced in length; and as you wish for a hedge 6 feet in height we would cut it down to 3 feet, leaving any young growths that come from the bottom a foot or 18 inches longer than the very strong old branches. The stumps will push very strong shoots, and next August you may shorten the side shoots so as to give the width of hedge you require, and the height may be reduced to 4 feet. You will thus obtain a close hedge from the bottom, adding to the height and width by leaving the annual growths a few inches longer than they were the year before, until the height and width required be attained.

WEEDS ON LAWN (E. M. M. P.).—We advise the removal of the Plants and other weeds with a knife, grubbing them up by the root any time between now and April during moist weather; and in that month we would sow over the lawn a mixture per acre of 4 lbs. *Festuca tenifolia*, 4 lbs. *Cynosurus cristatus*, 2 lbs. *Festuca duriuscula*, 1 lb. *Poa nemoralis*, 4 Trifolium minus, and 1 lb. *Lotus corniculatus minor*. After sowing, roll well, and do not mow for three weeks.

CAMELLIAS UNHEALTHY (Allegro).—Your Camellias having lost many of their leaves, we would repot the plants, removing most of the old soil, or as much of it as comes away freely from the roots, and select pots that will hold the roots without cramping them or cramping them in. Drain the pots well, and employ for potting the surface of a pasture where the soil is a light loam, taking no more than an inch of the surface; and this turf, torn in small pieces by the hand, may be placed around the roots, making it firm about them. The neck of the plant should be level with the rim of the pot. A good watering may be given after potting, and the soil should at all times be kept moist, but not watered excessively. The plants may be lightly syringed overhead morning and evening until they recover from the potting, and slight shade from bright sun should be afforded them. We think your almost leafless plants will have made fresh roots before autumn, and with careful watering in winter will in spring make many young shoots. You cannot do anything now with those plants that have many leaves but show no appearance of bloom, beyond repotting them if they require it; and your plan next year will be, when they commence making new growths, to keep them well supplied with water, securing to them a moist atmosphere with partial shade and a slight increase of temperature, under which conditions they should be continued until the growths are made, when the admission of more air, a less moist atmosphere, and a situation more fully exposed to light, will secure the ripening of the wood, and we think you will have a plentiful show of buds.

BOXES FOR PELARGONIUM CUTTINGS (Fred).—The boxes may be of any size, but we prefer them for handiness not more than 3 feet long and from 9 to 12 inches in width. We simply have a board of 9 or 11 inches wide cut into as many lengths approaching to 3 feet as it will make without waste, and place these 3 inches deep upon the bottom, and nail them securely. We then fill in the ends with boards placed on the bottom, well nailing the ends to the sides and the bottom to the ends. We use nothing but a saw, hammer, and nails, and care nothing about close joints, as any defects in this respect answer admirably for drainage. After inserting the cuttings in the boxes we place them out-doors in an open sunny situation, the hotter the better, and keep the soil moist. The cuttings will strike with certainty. We remove them to a sheltered situation in October, and take them in-doors when there is a likelihood of severe frost.

PIT FOR WINTERING PLANTS (Idem).—Your proposed arrangements will answer admirably for the hardier kinds of bedding plants. We do not see the necessity for a wall 2 feet above ground, but we would take out the soil to the depth of 18 inches, and merely have a wall above ground of 6 or 9 inches in height, and 9 inches of the space below ground we would fill with rough cinders. The height at back might be diminished so as to correspond with that of the front, for the closer you have the glass to the ground the safer the plants will be from frost. It will be necessary to cover the glass with mats and straw during severe weather, and the ground in front of the pit should be covered with 6 inches of ashes or litter in winter.

OLD HOTBED FOR CALCEOLARIA CUTTINGS (Idem).—Your hotbed sunk in the ground will answer perfectly for Calceolaria cuttings, placing

3 inches of rich soil over the dung, and then 2 or 3 inches of sand. The cuttings need not be put in until the beginning of October, and after giving a good watering they cannot have too much air, protection being afforded from rains and frost.

VEGETABLE MARROWS MILDEWED (C. E. Miller).—Mildew is apt to appear when they are grown in too rich soil, and upon a bed of decaying vegetable matter without a sufficient depth of soil over it for the roots to grow in. A close wet soil containing an excessive amount of vegetable matter, and dry weather, are very favourable to the development of mildew. The dusting of the leaves and stems with flowers of sulphur will, to a certain extent, keep it in check. It is not caused by honeydew.

VIOLET CULTURE IN POTS (R. B.).—We hope to answer your questions fully next week.

VINE IN AN ORCHARD-HOUSE (South Croydon).—If you have room, plant it inside.

STRAWBERRIES FOR FORCING (J. W. J.).—Of the kinds of Strawberries named by you, none of them will be useful for forcing to come in at Christmas. The only kinds that we have found of any value for early forcing were May Queen and Black Prince. These, however, are not in your list, whilst those named will, we are sure, do no good if you were to force them for fruit to be ripe at Christmas. The time you name as wishing for the fruit to ripen is as early as you may successfully commence forcing the kinds you have in pots for the purpose, and they will give you ripe fruit in March. You must afford the plants after October the protection of a cold pit or cool house, keeping them near the glass. Of the kinds you have—Sir Joseph Paxton and Marguerite are best for early forcing, and we should introduce a batch of them early in December into a house from which frost is merely excluded, assigning them a light and airy situation near the glass, and being careful not to over-water, and not to force them much before Christmas, after which the temperature may be gradually increased. Early in January we would introduce a batch of Keens' Seedling and Empress Eugenie, and the remainder, if any, of Sir J. Paxton and Marguerite, following with President and Wonderful in about three weeks or a month, and at a similar interval, Prince of Wales and La Constante may follow, concluding with Sir Charles Napier and British Queen.

CYANOPHYLLUM MAGNIFICUM PROPAGATION (Tim).—The culture of his plant was not given in the "Cottage Gardeners' Dictionary," because the plant was not introduced when the first edition was published. It is propagated by cuttings, the tops of the shoots being taken off below the second joint, not counting the extreme point. Cut them across below the lowest joint, and remove the lowest pair of leaves. Drain a pot well, and fill it to three-fourths its depth with a compost of sandy peat two-thirds, and one-third sandy loam, then to the rim with silver sand. A hole is then made in the centre of the pot, the cutting inserted to the joint next above that at which it was cut over, and the hole around the cutting filled with sand. A gentle watering should then be given, and the pot plunged in a hotbed of from 70° to 75°, and covered with a bell-glass. Shade from bright sun, and with a brisk heat, and the soil kept moist but not wet, the cutting will be well rooted in about six weeks, and should be hardened off, potted, and grown on. Kemp's "How to Lay out a Garden," will suit you. You will find instructions for Melon and Cucumber culture in the "Kitchen Garden Manual," which you can have free by post from our office for five postage stamps. If you will inform us more precisely to what your other question refers, we will endeavour to answer it.

PIT FOR BEDDING PLANTS (L. P.).—You might make a very good span-roofed pit to answer the purpose proposed thus—sink it 2 feet below the ground-level, make it 12 feet wide, height to ridge from floor 9 feet, height of the side walls altogether 4 feet, height above the ground-level outside 2 feet, and have ventilators placed in the wall. The cheapest plan would be to have all the roof fixed, and 3½-inch deep sash-bars would do, so placed as to receive glass 16 or 18 inches wide. The best plan for top air in such a short house would be to have two ventilators a yard wide, and a good opening a yard deep at each end just below the ridge. If the house had been much larger we would have recommended a double ridge-board, kept 8 inches apart by blocks, and between these blocks, a pivot-hung wooden ventilator, and all secured by two boards outside forming a coping, with plenty of space to let the air in. We think the simpler one will do for such a short house. With your walk down the middle, of 3 feet, you will have a platform-table on each side 4½ feet wide, and you will have storage-room beneath the table for storing plants at rest, and also for setting plants along the side of the path. With, say four rafters 3 inches thick, one at each end, and two divided equally over the roof, you could have over the headway a suspended platform of 18 inches in width, which would hold many little plants. We have a doubt, however, as you propose heating the place from your present boiler, whether a house all above ground would not answer your purpose better, so far as the heating was concerned. In a pit you would gain a little as respects warmth, from having less wall exposed, but that would be greatly counteracted by the greater dampness you would have, even if the hot-water pipes were placed on the floor. The expense of removing the soil is also something, and then there is the constant unpleasantness of stepping down into a such a house, instead of stepping up on the floor, which, on that account, would always be more pleasant and dry. A small house, therefore, we would think about before sinking for the pit. In the latter case damp is dispelled in winter with more difficulty. The chief advantage of a pit so little above the ground level is, that you could more easily give it protection in very severe weather in winter. There will be no difficulty in your heating, provided the boiler is beneath the place to be heated—that is, lower in level. Of course, you will want taps or valves to shut off or let on the heat as necessary. The expense of such a house will depend on the finishing. You can buy very good glass for such a purpose, cut to the size you want, at 2d. per foot, and wood 1½ inch wide and 3 inches deep, with wall-pieces, &c., planed and cut to size. We think what is called 16-oz. glass would do, but if you want to be surer 21-oz. will cost about one-third more.

EXHIBITING DARLIES AND GLADIOLUS (Inquirer).—Size of box for twelve Dahlias, 2 feet by 18 inches, 6 inches high at back, and 4 inches in front. For Gladiolus about the same. Both of these flowers may be cut the evening before. Dahlias carry best in their tubes as they are to be shown, Gladioli laid gently in the box. Do not trust to the tender mercies of porters or all will be a mass of ruin.

BIENNIALS AND PERENNIALS (Huntingdonian).—Biennials are those plants which are sown in one year, stand the winter, and after blooming the succeeding, die down never to appear again. Perennials are those which when they die down appear in the following year. Marvel of Peru is so called from the generic name *Mirabilis*, signifying wonderful.

WHITE MUSCADINE ORANGE (H. Foy).—This will succeed perfectly in the same house as the Hamburg.

MANETTI STOCK FOR ROSES—SELECT VARIETIES (Humble Cottage).—One "who takes delight in his garden, and hopes to become a Rose-grower in time," wishes me to answer him, through THE JOURNAL OF HORTICULTURE, whether Manetti Roses will suit his rather shallow soil which is very dry and hot in summer. It is the very stock for the purpose. He also wishes to purchase one dozen of Roses, strong-growers and free-flowerers, in the style of Jules Margottin. I presume he has Jules Margottin. I advise him to add these excellent Roses, or some of them:—John Hopper, Baronne Prevost, Victor Verdier, Duchesse de Medina Celi, Marguerite de St. Amand, Gloire de Dijon, Madame Alfred de Rougemont, William Oriffiths, Charles Lefebvre, Senateur Vaise, Marechal Niel, Madame Boutin, Due de Cazes, Prince Camille de Rohan, and Maurice Bernardin. He cannot choose wrong.—W. F. RADCLIFFE.

GRAPES MILDEWED (W. M. M.).—By all means retain the Vines, and in future attack the mildew on its first appearance, adopting preventive measures as well. Read Mr. Pearson's remarks in our last number.

PRUNING DEVONIENSIS ROSE—STRIKING CUTTINGS (T. R. D.).—The Rose, I presume from its growth, is not the old Devonensis, but the Climbing Devonensis. In either case the treatment must be the same. Tea Roses and Tea-scented Noisettes require merely thinning when the tree is overcrowded with shoots, and to be cut back to the first plump eye on the tops of the shoots as far as they are ripe. The time to prune such sorts depends upon the character of the spring; usually April or May is the best time—i.e., after severe frosts or sharp hoar frosts are over. I should not cut any of the shoots now. After winter is over "T. R. D." will see better where to cut. No doubt after such rapid growth the tops of the shoots will die back; he can then cut back to the first plump eye below the withered tops. As regards cuttings for striking, the wood must be ripe. He can in September (the best time, because the earth is hot and the air cool), devote some portion of the old wood to this purpose. Roses strike best with a heel. No. 4 shoot and the shoot nearest the window are the parts that should be used for striking.—W. F. RADCLIFFE.

SMALL HOTHOUSE FOR GENERAL PURPOSES (N.).—We are glad to hear of your success, and that our recommendations proved of such service to you.

MELONS CRACKING (E. Janett).—The roots must have gone to the outside, and absorbed more humidity than was required by the fruit.

GLASS WALLS (B. L. B.).—We do not know where you could procure the bars boiled in creosote, but you could prepare them for yourself, or any hot-house-builder could furnish them.

VINE LEAVES ATTACKED BY THRIPS (G. H. W.).—Your Vine leaves are attacked by thrips, with which the leaf sent was swarming. Try fumigation and subsequent syringing and ventilation.

LAYING-OUT A FLOWER GARDEN AND LAWN (T. H.).—Write to Mr. John Gibson, jun., Surrey Lane, Battersea, London, S.W.

CASTOR-OIL PLANT (J. Bayly).—It is not the true Castor-Oil plant, but a species of the same genus. Sow the seed and see what comes of it.

ORNAMENTAL BORDER FLOWERS (Moderation in all Things).—We do not know of any nurserymen who deal specially in these plants. If there are such, it would be to their interest to make their collections known. As there is now a growing taste in that direction, which is rapidly increasing. That several nurserymen have good collections of border flowers we know, but it would be against our rule to name them.

CARTER'S ASH-TOP FLUKE POTATO (F. Richardson, Chatteris).—The sample of this Kidney Potato was very fine, the skin very smooth, the eyes small, and few in number.

HEATING A SMALL HOTHOUSE (R. O. S.).—We are not acquainted with "Moule's heating apparatus." For such a forcing and general house for flowers—a lean-to 30 feet long, and divided in the middle by a glass partition—hot water heating would be the best, and the simplest would be to have the circulation perfect in the end next the boiler, but to be continued by opening valves when deemed necessary. A small boiler, either saddle-backed or conical, will answer the purpose, and there should be four four-inch pipes in the first division, and two at least in the second. We once managed such a house very cheaply and successfully by means of a small flue entering one end beyond the pathway, going along the front, and crossing the other end to a chimney in the north wall. This always secured the greatest heat next the furnace, and if a little more at times went to the farther end than was necessary, that was easily counterbalanced by giving more air than otherwise would have been necessary. Of course, when people ask the best way of heating such a house, we say hot water, it gives so much less trouble in the house, and is so cleanly, but for a small house there can be no doubt that the flue is by far the cheapest at first, and much cheaper every year as respects fuel and attendance afterwards, and properly seen to, it is just as safe. No boiler for a small house can be so managed as to prevent more heat going up the chimney than from a flue 40 or 50 feet in length.

EVERGREENS FOR CONSERVATORY ROOF (J. R., a Constant Subscriber).—We cannot imagine what the object is for planting in an outside border; but we presume there is next to no fire heat employed in winter, and we therefore advise *Billardiera scandens*, *Bignonia capreolata*, *Ceanothus integrifolius*, *Escallonia macrantha*, *Stantonia latifolia*, and *Lardizabala bitemata*.—Or the following will succeed with but a moderate amount of fire heat—*Berberidopsis corallina*, *Sollya linearis*, *Dolichos lignosus*, *Passiflora cærulea racemosa*, *Habrothamnus elegans*, and *Jasminum grandiflorum*.

ERRATUM.—In the eighth line of the report of the Royal Horticultural Society's Floral Committee, page 137, for "blue," read *lilac*.

NAMES OF FRUIT (J. R.).—The Grape you sent is certainly Duchess of Buccleuch, and we are much surprised to see some of the berries cracked. (*A. B. B.*)—Red Summer Calville Apple. (*H. P.*)—The Pears you sent are much too immature. Send when they are ripe.

NAMES OF PLANTS (C. W., Eye, Herefordshire).—1, *Veratrum nigrum*; 2, *Potentilla atrosanguinea*; 3, *Pibox subulata*; 4, *Scarlet Martagon Lily*. (*P. I. N.*)—*Clematis viticella purpurea*. (*J. N.*)—*Folia microphylla*. (*J. T. S.*)—*Erigeron bellidifolius*. 1, *Phlox pratensis*; 2, *Triticum repens*; 3, *Calamagrostis lanceolata*. (*G. S.*)—*Aconitum napellus*; *Campanula rhomboides*. (*W. Lawrenson*)—1, Red-berried Elder; 2, *Leycesteria formosa*; 3, *Viburnum opulus*; 4, *Escallonia rubra*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending August 27th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 21	30.110	29.990	77	51	65	63	W.	.00	Very fine; exceedingly fine throughout.
Thurs. 22	30.049	29.998	73	48	65	+2	S.W.	.00	Clear and fine; very fine; fine at night.
Fri. . . 23	30.051	30.009	75	49	64	62	W.	.00	Very fine and hot; exceedingly fine at night.
Sat. . . 24	30.088	30.038	74	55	64	62	S.W.	.00	Cloudy; very fine; clear and fine at night.
Sun. . . 25	30.027	30.003	75	57	64	61	S.W.	.00	Fine; very fine; overcast at night.
Mon. . . 26	29.971	29.956	69	48	62	60	N.E.	.14	Overcast; showery; heavy showers at night.
Tues. . 27	30.040	30.000	67	48	62	60	W.	.00	Fine, light clouds; very fine throughout.
Mean	30.048	29.999	72.85	50.85	63.71	61.43	..	0.14	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

TESTIMONIAL TO MR. EDWARD HEWITT.

I HAVE been thinking for some months past of proposing a testimonial to Mr. Hewitt, the veteran judge of poultry, who labours so abundantly in this department for the general good of both committees and exhibitors, and whose decisions on the whole give more satisfaction, and command more respect, than those of any other arbitrator. If we look over the list of Shows we shall find that Mr. Hewitt is employed at nearly three-fourths of them, and this fact alone testifies that his decisions generally inspire confidence in his judgment and integrity; while if we look over the catalogues of those Shows whose committees previously announce that he will be one of the arbitrators, the numbers of entries are evidence that he is highly respected by the great majority of exhibitors. Of course there are, and always will be, some grumblers and fault-finders, but I venture to say that if my suggestion be acted upon, the generous response which will follow the appeal will prove to

demonstration that Mr. Hewitt is the most respected and trusted of all our judges of poultry.

To make the testimonial more general I would suggest that a subscription be entered into of not more than 2s. 6d. each, to be expended in the purchase of a piece of plate, a timepiece, or purse of money, as may be most agreeable to Mr. Hewitt's views and feelings. I would limit the amount of subscription so that it might not be the gift of the wealthy few, but that the majority of exhibitors might thus be enabled to testify their respect and esteem for a gentleman who has judged at hundreds of Shows and travelled thousands of miles without fee or reward, except expenses out of pocket, on purpose to encourage the growing taste for high-class poultry, and to benefit the Societies under whose fostering care the fancy has risen to its present high standard. I feel sure you will allow room in your columns to throw out this suggestion.—J. R. Jessor, *Beerley Road, Hull*.

[Most readily do we insert this proposal, and no language we could with propriety employ would express too strongly our estimate of Mr. Hewitt's ability, integrity, and assiduity as a judge of poultry. We cannot afford the time, or we would

offer to be active in carrying out this proposal, but if three gentlemen will form themselves into a Committee, have circulars printed, and forwarded to all poultry exhibitors, and an advertisement inserted in the appropriate journals, stating to whom subscriptions may be sent, we have no doubt that the response will be satisfactory. We would not limit the subscription to half-a-crown, let those who can only afford a shilling send it; but we would not prevent the more wealthy sending larger contributions.—[EDS.]

DOES GOOD MANAGEMENT CAUSE, OR MERELY HASTEN THE PRODUCTION OF EGGS?

Be so good as to inform me whether, by judicious feeding and treatment, persons actually produce eggs in domestic fowls, or whether they merely hasten the production of eggs, as developments of the germs in a hen's ovary, supposing her to have only a certain limited number of germs when she first begins to lay, as the following quotation from a book before me seems to imply:—

"Hens also," to use the words of Willoughby, "as they for the greater part of the year daily lay eggs, cannot suffice for so many births, but for the most part after three years become effete and barren, for when they have exhausted all their seed eggs, of which they had but a certain quantity from the beginning, they must necessarily cease to lay, there being no new ones generated within."

Why has the goose obtained the character of being a silly bird?—BRIDLEGOOSE.

[Although we have opened many thousands of hens, we never saw one in which the embryo eggs did not exist in some condition. At a certain age they form in the pullet. It is the age of puberty, and by natural process the eggs are laid. When that first process is over, the hen conforms to the rule of seasons. She does not lay in the winter, the severe frosts would spoil the eggs, or if they were hatched, the chickens would die—the nights are too long, the days are too cold. Left to themselves hens would no more produce and rear chickens in the winter than Pheasants, Partridges, and Wild Ducks produce their young at that time. Yet the germs of the eggs are within the hen all the time, and in the early spring when everything is springing into life, the hen's face and comb become red, the active circulation becomes more so, and a casual observer cannot help saying, "That hen is going to lay." If she were killed at that time, and opened, the little dark spots that had remained dormant all the winter, would be found of different sizes, their transparent skins showing the thick yellow yolk within them, and themselves covered with ruddy veins. They are of different sizes and states of forwardness, so distinctly marked that a tyro might accurately show the order in which they would have been laid. The knot of eggs is suspended from the back, and hangs like a bunch of grapes, in such numbers, too, at the top, that it looks almost like a piece of fish's roe. We repeat we have never seen an instance out of hundreds of thousands in which these were entirely exhausted. Extra feeding may cause them to be developed earlier—that is, the egg that by natural process would have been laid in March, may be laid in January, but if the germs were destroyed, no amount of feeding or management could produce others. Where hens do not lay at all, the embryo eggs are found full of blood, a rupture of some kind has taken place; this is often caused by the abuse of stimulants. If the rupture be of the embryo egg, and the intestines become saturated with yolk, the hen at once becomes a hen cock. We have many hens good layers, that are more than three years old. We do not call them old ones.

A goose is called a foolish bird, because it is said Queen Elizabeth said it was so, being too much for one, and not enough for two. Did you ever run over one, or hear of one being run over? We never did.]

MANCHESTER AND LIVERPOOL AGRICULTURAL SOCIETY'S POULTRY SHOW.

This commenced on the 27th inst., and closes to-day. The competition in the poultry classes was confined to birds hatched in the present year. The following is the prize list; but we must defer our report till next week:—

DONKINGS (Coloured).—First and Second, Hon. H. W. Fitzwilliam, Wentworth Woodhouse, Rotherham. Third, F. Schofield, Brookfield, Cheshire.

DONKINGS (Silver-Grey).—First, T. Statter, Whitefield, Manchester. Second, J. Robinson, Garstang. **Cockerel.**—Prize, T. Statter.

SPANISH.—First, F. James, Peckham, Surrey. Second, H. Beldon, Bingley, Yorkshire. Third, M. Forrand, Dalton, near Huddersfield. Commended, E. Brown, Sheffield. **Cockerel.**—First, M. Forrand. Second, F. James. Highly Commended, H. Beldon.

COCHIN-CHINA (Buff and Cinnamon).—First, P. Taylor, Manchester. Second, G. Fell, Warrington. Third, H. Mapplebeck, Moseley, near Birmingham. Commended, J. Nelson, Heaton Mersey, near Manchester.

Cockerel.—First, J. H. Dawes, Moseley Hall, near Birmingham. Second, A. Bamford, Middleton.

COCHIN-CHINA (Brown and Partridge-feathered).—First and Second, E. Tudman, Whitechurch. Third, J. K. Fowler, Aylesbury. **Cockerel.**—First, G. H. Wheeler, Middleton. Second, J. R. Rodbard, Wington.

BRAMA FOOTRA.—First, H. W. Boyle, Bray, Wicklow. Second, H. Lacy, Hebdon Bridge. Third, J. K. Fowler. Highly Commended, T. Statter. Commended, Mrs. M. Seamons, Aylesbury. **Cockerel.**—First, H. W. Boyle. Second, G. H. Wheeler.

GAME (Black-breasted Reds).—First, C. Chaloner, Whitwell, Cheshire. Second, Rev. W. J. Mellor, Colwick Rectory, Nottingham. Third, J. Halsall, Inco, near Wigan. **Cockerel.**—Prize, J. Halsall.

GAME (Brown and other Reds, except Black-breasted).—First, T. Statter (Brown Red). Second, J. Wood, Wigan (Brown-breasted Reds). Third, W. Bourne, Heaviley, Stockport (Brown-breasted Reds). **Cockerel.**—First, J. Wood (Brown-breasted Red). Second, T. Statter (Brown Red).

GAME (Any variety except Black-breasted and other Reds).—First and Second, J. Halsall (Duckwing). Third, W. Bourne (Duckwing). **Cockerel.**—First, J. Halsall (Duckwing).

HAMBURGH (Golden-pencilled).—First, W. Parr, Patricroft, near Manchester. Second and Third, S. Smith, Northowram, Halifax. Highly Commended, J. Robinson, Garstang. Commended, H. Beldon. **Cockerel.**—First, T. Wrigley, jun., Tonge, Middleton. Second, G. H. Wheeler.

HAMBURGH (Silver-pencilled).—First, H. Beldon. Second, J. Fielding, Newchurch. Third, H. Pickles, jun., Early. **Cockerel.**—First, H. Beldon. Second, H. Pickles, jun.

HAMBURGH (Golden-spangled).—First, T. Scholes, Chadderton. Second, J. Chadderton, Holmwood. Third, N. Marlor, Denton. Highly Commended, J. Robinson. **Cockerel.**—First, E. Brierley, Heywood. Second, J. Roe, Hadfield. Commended, J. Buckley, Taunton, Ashton-under-Lyne.

HAMBURGH (Silver-spangled).—First, H. Pickles, jun. Second, J. Fielding, Newchurch. Third, H. Beldon. Highly Commended, J. Turner, Radcliffe, near Manchester. **Cockerel.**—First, J. Fielding. Second, J. Turner.

HAMBURGH (Black).—First, C. Sidgwick, Keighley. Second, J. Clegg, jun., High Compton, Shaw. Third, J. Robinson. **Cockerel.**—Prize, J. Clegg, jun.

POLISH (Any variety).—Prize, H. Beldon. **Cockerel.**—Prize, H. Beldon.

ANY VARIETY NOT INCLUDED IN THE FOREGOING CLASSES.—First and Third, Col. Stuart Wortley, Grove End Road, London (Black Crested Cocks and Black and White Houdans). Second, J. Robinson (White Dorking).

GAME BANTAMS (Black-breasted Reds).—First and Second, J. W. Morris, Rochdale. Third, G. R. Davies, Knutsford, Cheshire. Highly Commended, J. Halsall. Commended, R. Gerard, Chobwell. **Cockerel.**—First, J. Holland, Manchester. Second, J. W. Morris. Highly Commended, P. Taylor.

GAME BANTAMS (Any variety except Black-breasted Reds).—Prize, Rev. W. J. Mellor (Duckwings). **Cockerel.**—Prize, R. Gerard.

BANTAM (Any variety except Game).—First, S. & R. Ashton, Mottram, near Manchester. Second, T. C. Harrison, Hull. Third, P. Taylor.

DUCKS (Rouen).—First, C. P. Ackers, Bickersham, near Wigan. Second and Third, E. Leech, Rochdale. Highly Commended, E. Leech.

DUCKS (White Aylesbury).—First, E. Leech. Second, T. Leech, Rochdale. Third, J. K. Fowler. Highly Commended, Mrs. M. Seamons; M. Farrand; J. K. Fowler.

DUCKS (Any other variety than the foregoing).—Prize, J. Dixon, Bradford (Grey Mall).

GESE.—First and Second, J. K. Fowler (Toulouse). Third, D. R. Davies (Toulouse). Commended, Mrs. S. Burgess, Tabley, Knutsford (Grey).

TURKEYS.—First and Second, E. Leech.

PIGEONS.

POUTERS (Any colour).—First, J. Thackray, York (Blue Pouters). Second, R. Fulton, Deptford (White Pouters). Highly Commended, R. Fulton (Yellow Pouters); E. E. M. Roys, Greenhill, Rochdale (Black Pouters).

CARRIERS (Black).—Cock.—First, E. E. M. Roys. Second, R. Fulton. Highly Commended, W. Maclaren, Highfield, Pendlebury, Lancashire. Hen.—First and Second, R. Fulton. Highly Commended, E. E. M. Roys.

CARRIERS (Any other colour).—Cock.—First and Second, R. Fulton. Highly Commended, H. Yardley, Birmingham. Hen.—First, E. E. M. Roys. Second, R. Fulton. Highly Commended, H. Yardley.

CARRIERS (Any colour).—First, R. Fulton (Black). Second, E. E. M. Roys.

DRAGONS.—First and Second, A. Lowe, Over Hulton, near Bolton (Blue Dragons). Highly Commended, R. Marshall, Lower Broughton, Manchester (Blue Dragons).

ANTWERPS.—First, H. Yardley. Second, W. P. Wilding, Montford, near Burnley, Lancashire.

JACOBINS (Any colour).—First, E. E. M. Roys (Black). Second, J. Thackray.

NUNS.—Second, H. Yardley.

BARBS.—First and Second, J. Thackray. Highly Commended, E. Brown, Sheffield.

TURBITS.—First, W. Gotton, Driffield. Second, J. Thackray. Highly Commended, H. Mapplebeck, Moseley, near Birmingham.

OWLS.—First, J. Fielding, jun., Larkfields, Rochdale. Second, R. Fulton. Highly Commended, H. Yardley; J. Fielding, jun.

TRUMPETERS.—First, H. B. Whittaker, Middleton. Second, J. Thackray.

FANTAILS.—First, H. Yardley. Second, J. Thackray. Highly Commended, W. Gamon, Chester; W. Gotton, Driffield.

TUMBLERS (Almond).—First and Second, R. Fulton. Highly Commended, H. Yardley; J. Thackray; J. Fielding, jun.

BEARDS.—First, H. Yardley. Second, H. Mapplebeck.

TUMBLERS (Bald).—First, E. E. M. Roys. Second, J. Fielding, jun.

TUMBLERS (Bald, any other variety).—First and Second, R. Fulton (Yellow Tumblers and Red Mottled Agates).

ANY OTHER VARIETY THAN THE FOREGOING.—First and Second, H. Yardley. Highly Commended, H. Yardley; Countess of Derby, Knowsley (Isabels); E. E. M. Roysds (German Toys).

JUDGES.—Poultry: Messrs. Hewitt, Hindson, Smith, and Teebay.

KEIGHLEY POULTRY SHOW.

This was held on the 23rd, and the day being fine it proved a great success. The entries for poultry were larger than on any previous occasion.

In addition to the money prizes, two silver cups were given, one for the best Game cock, which was awarded to Mr. E. Aykroyd; the other for Black Hamburg chickens, which was awarded to Mr. C. Sidgwick. *Cochins* and all the Hamburgs were excellent, the principal prize-takers being Mr. Beldon and Mr. Pickles. In other varieties, Mr. Beldon also secured a great number of prizes.

Pigeons were good. The cup for the best pair was awarded to Mr. E. Horner, Harewood, for Jacobins.

GAME COCK.—Cup, E. Aykroyd, Bradford.
COCHIN-CHINA (Any colour).—First and Second, H. Beldon, Goitstock. Third, C. Sidgwick, Riddlesden Hall. *Chickens*.—First, W. A. Taylor, Manchester. Second, H. Beldon. Third, C. Sidgwick.

SPANISH (Black).—First, H. Beldon. Second, J. Thresh. Third, E. Brown, Sheffield. *Chickens*.—First, J. Newton, Silsden. Second, M. Farrand, Dalton, near Huddersfield. Third, J. Berry, Silsden.

HAMBURGH (Silver-pencilled).—First and Third, H. Beldon. Second, H. Pickles, jun., Earby, Skipton. *Chickens*.—First, H. Beldon. Second, and Third, Messrs. W. & J. Barstow, Bingley.

HAMBURGH (Golden-spangled).—First, H. Beldon. Second, J. Throupp, Bracken Hill. Third, A. Driver, Morton Banks. *Chickens*.—First, W. Vickers, Otley. Second, H. Beldon. Third, W. Driver.

HAMBURGH (Golden-pencilled).—First, S. Smith, Northowram. Second, H. Beldon. Third, H. Pickles, jun. *Chickens*.—First, H. Pickles, jun. Second, H. Beldon. Third, S. Smith.

HAMBURGH (Silver-spangled).—First, H. Pickles, jun. Second and Third, H. Beldon. *Chickens*.—First, H. Beldon. Second, T. Robinson, Baildon. Third, J. Berry, Sutton.

HAMBURGH (Black).—First, W. Green, Keighley. Second, H. Beldon. Third, S. Butterfield, Keighley. *Chickens*.—Cup, First, Second, and Fourth, C. Sidgwick. Third, H. Beldon. Commended, C. Sidgwick; H. Pickles, jun.

POLISH.—First, Second, and Third, H. Beldon. *Chickens*.—First and Second, H. Beldon. Third, T. E. Kell, Wetherby.

DORRING.—Second, H. Pickles, jun. *Chickens*.—First, E. Leach, Rochdale. Second, W. A. Taylor, Manchester. Third, H. Beldon.

GAME (Red).—First, E. Aykroyd. Second, J. Hodgson, Bradford. Third, G. Noble, Staincliffe. *Chickens*.—First, G. Noble. Second, W. Spencer, Haworth. Third, J. Beetham, Manningham.

GAME (Any other variety).—First, E. Aykroyd. Second, T. Robertshaw, Ilkington, near Halifax. Third, J. Fortune, Morton Banks. *Chickens*.—First, W. Fell, Adwalton. Second, T. Robertshaw. Third, J. Fortune.

ANY OTHER DISTINCT BREED.—First, Col. Stuart Wortley, Grove End Road, London. Second, H. Beldon. Third, J. Hargreaves, Skipton. *Chickens*.—First, Col. Stuart Wortley. Second, H. Beldon. Third, J. Hargreaves.

GAME BANTAMS.—First, G. Noble, Staincliffe. Second, E. Aykroyd. Third, G. Hopkinson, Haworth. *Chickens*.—First and Second, J. Noble. Third, T. Briden, Earby.

BANTAMS (Any other Distinct Breed).—First and Third, T. Burgess Brighouse. Second, W. A. Taylor, Manchester. *Chickens*.—First, W. A. Taylor. Second, E. Hutton, Pudsey. Third, T. Burgess.

SELLING CLASSES.—ANY VARIETY.—Cock.—First, M. Scott, Cote, Idle. Second, H. Beldon. Third, W. A. Taylor. *Hens*.—First, J. Marchant, Halifax. Second, W. Taylor. Third, J. Thompson, Bingley. Highly Commended, H. Beldon.

DUCKS (Rouen).—First and Third, E. Leech, Rochdale. Second, T. Dean, Keighley.

DUCKS (Aylesbury).—First, E. Leech. Second, M. Farrand. *Chickens*.—First and Second, J. Dixon, Bradford. Third, E. Hutton. Commended, F. G. Godwin, Sheffield.

DUCKLINGS.—First and Second, E. Leech. Third, W. Bentley, Allerton. *Geese*.—First, E. Leech. Second, S. H. Stott, Rochdale. Third, Messrs. A. Rhodes & Son, Marley Hall.

PIGEONS.

FOUTER OR CROPPER.—Cock.—First, E. E. M. Roysds, Rochdale. Second, F. Crossley, Elland. Third, T. Burgess, Brighouse. Commended, J. Hawley, Bingley; C. Cowburn, Leeds. *Hens*.—First, F. Crossley. Second, E. E. M. Roysds. Third, T. Burgess.

CARRIER.—Cock.—First, F. Crossley. Second, E. E. M. Roysds. Third, E. Brown, Sheffield. *Hens*.—First and Third, E. E. M. Roysds. Second, E. Horner, Harewood, Leeds.

TUMBLERS (Almond).—First, J. Fielding, Rochdale. Second, C. Cowburn, Leeds. Third, J. Thackray, York.

TUMBLERS (Mottled).—First, J. Fielding. Second, J. Hawley. Third, J. Percival.

BALDS, OR BEARDS.—First, Second, and Third, J. Fielding.

OWLS.—First and Second, J. Fielding. Third, J. Thackray. Highly Commended, F. Crossley; J. Fielding.

TURBITS.—First, E. Horner. Second, Messrs. Hattersley & Wilson, Thirsk. Third, J. Thackray. Highly Commended, A. & C. Smith, Silsden; H. W. Ilkington, Idle; J. Lister, Keighley.

JACOBINS.—Cup, First, and Second, E. Horner. Third, E. E. M. Roysds. Commended, J. Thompson, Bingley.

FANTAILS.—First, T. C. & E. Newbitt, Epworth. Second, J. Hawley. Third, E. Horner.

BARBS.—First and Third, J. Thackray. Second, F. Crossley.

DRAGONS.—First, J. Thompson. Second, A. Parry, Rochdale. Third, J. Lister.

TRUMPETERS.—First, Second, and Third, E. Horner.

MAGPIES.—First, E. E. M. Roysds. Second, H. Headley. Third, J. Thackray.

ARCHANGELS.—First, Messrs. Hattersley & Wilson. Second, H. Yardley, Birmingham. Third, C. Cowburn.

ANY OTHER BREED.—First, J. Hawley. Second, J. Thompson. Third, J. Thackray.

SELLING CLASS.—First and Second, J. Hawley. Third, A. & B. E. Laycock.

RABBITS.

LONG-EARED.—Duck.—First, A. H. Easton, Hull. Second, Messrs. Wagstaff & Hanson, Thorne. Commended, C. Gravel, jun., Thorne; F. Mosley, Leeds. *Doe*.—First, Messrs. Hanson & Wagstaff. Second, I. Slade, Boroughbridge.

ANY OTHER DESCRIPTION.—Duck.—First, E. Clayton, Morton Banks. Second, E. Driver. *Doe*.—First, E. Clayton. Second, A. H. Easton.

JUDGES: Mr. R. Teebay, Fulwood, Preston, and Mr. J. Douglas, Clumber.

WAKEFIELD AGRICULTURAL SOCIETY'S POULTRY SHOW.

The Exhibition of the above Society took place on the 21th instant in a commodious field a short distance from the railway station. The Show was a great success, both as regards the number of entries and of visitors, such indeed as could scarcely have been expected when the Society started a few years ago. The general arrangement and management of it were also excellent, and ere long it will rank with the best of the Yorkshire exhibitions. A tent, 80 yards long and 29 yards wide, was provided for the poultry and Pigeons—a most fortunate arrangement for them, considering how hot the sun was. Game stood at the entrance of the tent, and the two pens shown by Mr. Brierley were especially remarkable. The cup for the best pen was won by him with a splendid pen of Black-breasted Red. Some very good pens of Red Game Bantams were also exhibited. The first-prize pen of Ducks was most beautiful in colour, but a little too large. In the Variety class for Bantams, the pen of Pekins, from Mr. Burgess, took the first prize, a pretty pen of Blacks being second. It seems almost hopeless to show against oriental pets, as all Judges seem to be prepossessed in their favour. It would almost cause one to wish them a class to themselves. In the classes for adult *Hamburgs* there were some good birds, but suffering much from moulting. There were some excellent *Hamburg* chickens. The *Dorkings*, both old and young, were much better than is generally the case in the locality. There were large numbers of *Cochins*, both adult and chicken. The adult pen of Messrs. Taylor was all that could be desired, and the cup for the best pen (Game excepted), was well won with the pen of chickens belonging to these gentlemen; in fact, a more beautiful pair of birds of this variety is rarely seen. *Brahmas* of both ages were good, and shown in fine condition for this advanced season. *Polands* were first in the Variety class, and *Criee Cans* second.

Two pens of very large Aylesbury Ducks were shown by Mr. Farrand, though it would be well if these birds were free of the creamy colour of the plumage.

Of *Pigeons* there was a good show, and every class was well represented. The Carriers were good, and the Yellow Dragons shown by Mr. Thompson exceedingly smart. Mr. Hawley won the medal for the best pair in the Show with a capital pair of Blue Pouters of great length. The Trumpeters were of extraordinary merit, and the Owls and Turbits were equally good. The class for Nuns formed a pretty sight, and the Jacobins were greatly admired. A most beautiful pair of Ice Pigeons won in the Variety class.

GAME (Black-breasted or other Reds).—Cup and Second, C. W. Brierley, Middleton. Highly Commended, Hon. H. W. Fitzwilliam, Wentworth Woodhouse.

GAME (Any other variety).—First, G. Noble, Staincliffe, Dewsbury. Second, W. Fell, Adwalton, Leeds. *Chickens*.—First, Master J. Crosland, Wakefield. Second, G. Noble. Highly Commended, W. Fell.

GAME BANTAMS (Black-breasted and other Reds).—First, G. Noble. Second and Commended, Master C. Crosland, Wakefield. Highly Commended, G. H. Davies, Kentsford. Commended, W. F. Entwistle, Leeds.

GAME BANTAM (Any other variety).—First, W. F. Entwistle. Second and Highly Commended, Master C. Crosland.

BANTAMS (Any other variety).—First, T. Burgess, Brighouse. Second, W. A. Taylor, Manchester. Commended, S. Rhodes, Wyke, Normanton.

HAMBURGH (Golden-spangled).—First, J. White, Whitley, Netherton. Second, H. Beldon, Goitstock, Bingley. Highly Commended, T. C. & E. Newbitt, Epworth, Bawtry.

HAMBURGH (Silver-spangled).—First, H. Pickles, jun., Earby, Skipton. Second, H. Beldon.

HAMBURGH (Golden-pencilled).—First, S. Smith, Northowram, Halifax. Second, T. Wrigley, jun., Tonge, Middleton. Highly Commended, H. Beldon. Commended, H. Pickles, jun.

HAMBURGH (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, jun. *Chickens*.—First, H. Pickles, jun. Second, H. Beldon.

SPANISH.—First, H. Beldon. Second, J. Thresh, Bradford. *Chickens*.—First and Highly Commended, M. Farrand, Dalton. Second, H. Beldon.

DORKINGS.—First, W. H. King, Rochdale. Second, F. Key, Beverley. Commended, Hon. H. W. Fitzwilliam. *Chickens*.—First, W. A. Taylor. Second, J. White, Warlaby, Northallerton. Highly Commended, E. Leech, Rochdale; J. Ingram, Wakefield.

COCHIN-CHINA.—First, W. A. Taylor. Second, C. W. Brierley. Highly Commended, H. Beldon. *Chickens*.—Cup and First, W. A. Taylor. Second, C. Sidgwick, Keighley.

BRABIA FOOTRAS.—First, H. Lacy, Hebden Bridge. Second, E. Leech, Highly Commended, H. Beldon. Commended, H. Dowsett, Pleshey, Chelmsford. *Chickens*.—First, H. Lacy. Second, G. E. Osborn, Spalding. Highly Commended, H. Beldon. Commended, S. Robson, Brotherton, South Milford.

ANY VARIETY NOT CLASSED ABOVE.—First and Highly Commended, H.

Beldon (Polands). Second, Col. Stuart Wortley, Grove End Road. Commended, T. C. & E. Newbitt; J. Elgar, Newark (Houdans).

DUCKS (Aylesbury).—First and Second, M. Farrand. Highly Commended, E. Leech.

DUCKS (Rouen).—First, E. Leech. Second, C. Sidgwick. Highly Commended, Lady Hawke, Womersley Park; J. White.

GESE.—First, E. Leech. Second, Mrs. E. Ledger, Poppleton, York. Highly Commended, H. Poshett, Darrington, Pontefract. Commended, J. White; Lady Hawke; Mrs. Bunrell, Sharncliffe, Wakefield.

EXTRA STOCK.—Prize, E. P. Porter, Goole.

PIGEONS.

CARRIERS.—First, E. Horner, Harwood, Leeds. Second, H. Yardley, Birmingham. Highly Commended, J. Hawley, Bingley.

DRAGONS.—First, J. Thompson, Bingley. Second, A. & B. B. Laycock, Woodville, Keighley.

POUTERS.—Medal and First, J. Hawley. Second, H. Yardley. Commended, T. C. & E. Newbitt.

TRUMPETERS.—First and Second, E. Horner. Highly Commended, J. Thompson.

BARNS.—First and Highly Commended, E. Horner. Second, J. Hawley.

OWLS.—First, E. Horner. Second, A. & B. B. Laycock.

TURBITS.—First, E. Horner. Second, Holmes & Pickering, Driffield.

FANTAILS.—First, T. C. & E. Newbitt. Second, J. Hawley. Highly Commended, H. Yardley.

JACOBS.—First and Second, E. Horner. Highly Commended, J. Thompson.

NUNS.—First, Holmes & Pickering. Second, J. Thompson.

TUMBLERS.—First, F. Key. Second, J. Hawley. Highly Commended, J. Hawley; J. J. Berry, Western Bank, Sheffield.

ANTWRAPS.—First, J. Thompson. Second, Miss K. Crosland, Wakefield.

PIGEONS (Any other variety) First, H. Yardley. Second, J. Hawley, Commended, H. Yardley; J. W. Thompson, Hull.

JUDGES.—Richard Teebay, Esq., Fulwood, Preston, and Mr. J. W. Thompson, Southowram, Halifax.

WHITWORTH AND ROCHDALE POULTRY SHOW.

THIS Show was held on the 21st inst. in the grounds of W. E. Ryds, Esq., Greenhill, Rochdale. There were upwards of 260 pens of Poultry entered, many of them of excellent quality, and the Pigeons, likewise very numerous, were as a whole remarkably good, especially Pouters, Carriers, Almonds, Barbs (the first prize pair of which would certainly have carried the cup had they not been in moult, which the Owls had gone through), Owls, and the prize Trumpeters. The difficulty the Judges had to contend with, was not having more prizes to distribute amongst birds so equally matched as to quality. The following is the list of awards:—

SPANISH.—First, H. Beldon, Goitstock, Bingley. Second, E. Brown, Sheffield. *Chickens*.—First, J. Clewes, Walsall. Second, M. Farrand, Dalton, near Huddersfield. Highly Commended, H. Beldon; M. Farrand.

COCHINS (Cinnamon and Buff).—First, C. W. Brierley, Middleton. Second, W. A. Taylor, Manchester (Buff). Highly Commended, H. Beldon.

Chickens.—First, W. A. Taylor. Second, H. Beldon. Highly Commended, A. Bamford, Middleton; J. Nelson, Manchester.

ANY OTHER VARIETY.—First, C. W. Brierley. Second, A. Bamford.

Chickens.—First, W. A. Taylor. Second, H. Lingwood, Suffolk. Highly Commended, W. H. Wheeler.

BRAMHMS.—First, H. Laey, Hebden Bridge. Second, E. Leech, Rochdale. *Chickens*.—First, H. Laey. Second, W. H. Wheeler, Middleton. Highly Commended, J. K. Fowler, Aylesbury; H. Laey.

GAME.—*Cock*.—First and Second, C. W. Brierley. Highly Commended, Rev. W. J. Mellor, Nottingham; C. W. Brierley.

GAME.—First and Second, C. W. Brierley. Highly Commended, C. W. Brierley; Rev. W. J. Mellor. *Chickens*.—First, Rev. W. J. Mellor. Second, T. Dyson, Halifax. Highly Commended, T. Statter, Manchester; J. Hartley, Rochdale; T. Garlick, Rochdale.

POLANDS.—First and Second, H. Beldon. Highly Commended, Messrs. T. C. & E. Newbitt, Epworth. *Chickens*.—First and Second, H. Beldon. Highly Commended, R. Charlesworth.

HAMBURG (Golden-spangled).—First, T. Walker, jun., Denton, Manchester. Second, Messrs. C. A. & E. Newbitt. Highly Commended, Messrs. S. & R. Ashton, Mottram, Cheshire; H. Beldon. *Chickens*.—First, T. S. Chadderton, Manchester. Second, T. Walker, jun. Highly Commended, J. Wilde, Ashton; J. Chadderton. Commended, Messrs. S. & R. Ashton.

HAMBURG (Silver-spangled).—First, H. Pickles, jun., Earby, near Skipton. Second, H. Beldon. *Chickens*.—First, H. Pickles, jun. Second, H. Beldon. Highly Commended, H. Pickles, jun.

HAMBURG (Golden-pencilled).—First, H. Beldon. Second, T. Wrigley, jun., Middleton. Commended, H. Pickles, jun. *Chickens*.—First, W. Parr, Patricroft, near Manchester. Second, H. Beldon. Highly Commended, W. H. Wheeler.

HAMBURG (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, jun. *Chickens*.—First, H. Beldon. Second, W. Wilson, Rush Bed, near Rawtenstall.

HAMBURG (Black).—First, H. Beldon. Second, C. Sidgwick, Keighley. *Chickens*.—First, H. Beldon. Second, S. Lancashire, Chadderton. Highly Commended, J. Lancashire, Chadderton.

DORKINGS.—First, Mrs. A. Hart, Derby. Second, W. H. King, Rochdale. *Chickens*.—First and Second, Hon. H. W. Fitzwilliam, Rotherham. Highly Commended, E. Leech; E. Greenhalgh, Middleton; J. Stott, Healey, near Rochdale.

ANY OTHER DISTINCT BREED, EXCEPT BANTAMS.—First and Second, Col. Stuart Wortley, Grove End Road, London. Third, J. K. Fowler. Highly Commended, R. Hurst, Rochdale.

GAME BANTAMS.—First and Second, J. W. Morris. Highly Commended, G. Birtwistle, Haslingden; T. Collinge. *Cock*.—First, G. R. Davies, Knutsford. Second, J. W. Morris, Rochdale. Highly Commended, R. Charlesworth, Manchester; J. W. Morris; T. Collinge, Boarshaw Clough, Middleton.

BANTAMS (Any other Variety).—First, T. Burgess, Bradford. Second,

W. A. Taylor, Manchester. Highly Commended, J. W. Morris; Messrs. S. & R. Ashton; T. Burgess.

DUCKS (Aylesbury).—First, M. Farrand. Second, J. K. Fowler. Highly Commended, E. Leech; J. K. Fowler.

DUCKS (Rouen).—First and Second, E. Leech. Highly Commended, E. Leech; T. Statter, Manchester.

ANY OTHER VARIETY.—First and Second, C. W. Brierley.

GESE.—First, T. Statter. Second, S. H. Stott, Rochdale. Highly Commended, E. Leech; S. H. Stott; J. K. Fowler.

TURKEYS.—First and Second, E. Leech.

SELLING CLASS.—First, W. A. Taylor. Second, D. Howarth, Rochdale (Spanish). Highly Commended, E. Buckley, Rochdale; Messrs. J. J. & J. Skyes, Rochdale.

EXTRA STOCK.—Highly Commended, S. H. Stott (Guinea Fowl).

PIGEONS.

POUTER OR CROPPER.—*Cock*.—Cup and First, F. Crossley, Elland, Yorkshire. Second, E. E. M. Ryds, Greenhill, near Rochdale. Highly Commended, W. Harvey, Sheffield. *Hen*.—First, W. Harvey. Second, J. Hawley, Bingley. Highly Commended, F. Crossley.

CARRIER.—*Cock*.—First and Second, F. Crossley. Highly Commended, E. E. M. Ryds, Rochdale. *Hen*.—First, W. Hargreaves, Bacup. Second, R. Fulton, Deplford, London. Highly Commended, F. Crossley; E. E. M. Ryds.

TUMBLERS (Almond).—First, F. Crossley. Second, R. Fulton.

BARDS OR BEARNS.—First, J. Fielding, jun., Rochdale. Second, J. Thackray, York. Highly Commended, J. Fielding, jun.; E. E. M. Ryds.

TUMBLERS (Any other variety).—First, J. Hawley. Second, R. Fulton. Highly Commended, S. Stott; J. Hawley; J. Percival.

OWLS.—Cup and First, F. Crossley. Second and Highly Commended, J. Fielding. Commended, H. Yardley, Birmingham; R. Fulton.

BARNS.—First, M. Hedley, Surry. Second, J. Thackray. Highly Commended, W. Hargreaves; M. Hedley.

TURBITS.—First, H. Yardley. Second, E. Horner, Leeds.

JACOBS.—First, E. Horner. Second, E. E. M. Ryds. Highly Commended, J. Thompson, Bingley, Yorkshire.

FANTAILS.—First, Messrs. T. C. & E. Newbitt. Second, E. Horner. Highly Commended, P. Caldwell, Westhoughton; H. Yardley.

DRAGONS.—First, C. Bulpin, Bridgewater, Somersetshire. Second, F. Crossley.

TRUMPETERS.—Cup, First, and Second, E. Horner.

MAGPIES.—First, J. Thackray. Second, E. E. M. Ryds. Highly Commended, H. Yardley.

ANY OTHER KIND.—First, A. Parry, Rochdale. Second, H. Yardley. Highly Commended, J. W. Thompson, Hull (Frillbacks); H. Yardley; C. Bulpin. Commended, H. Yardley.

SELLING CLASS.—First, J. Hawley. Second, J. Thompson. Highly Commended, E. Horner. Commended, J. Hawley.

RABBITS.—*Long-Eared*.—First, Messrs. Wagstaff & Hanson, Thorne. Second, C. Grail, jun., Doncaster. Highly Commended, J. Warden, Halifax; A. Parry. *Any other Breed*.—First, J. Lucas, Rochdale. Second, E. E. M. Ryds.

JUDGES.—*Poultry*: Mr. Thomas Dodds, Wakefield, and Mr. Richard Teebay, Fulwood, near Preston. *Pigeons*: Mr. William Smith, Beech Hill, Halifax, and Mr. F. Esquilant, Brixton, London.

MOTTRAM POULTRY SHOW.

THIS was held on the 19th inst. in a large weaving-shed kindly lent for the purpose, and forming an excellent protection from the heat of the sun, which was intense. Some of the classes were not well filled; but this deficiency was compensated by the quality of most of the winning pens. Several of the best pens of poultry and Pigeons arrived after the decisions of the Judges had been given in, which must have been very annoying to the exhibitors, especially as some of them had come from a distance of seventy miles the same morning.

Dorkings were poor throughout; but some first-class *Spanish*, both adult and chickens, were shown by Messrs. Burch & Boulter. In *Cochins* there were some very fine pens of Buffs in the adult class, and the young ones were exceedingly handsome, the cockerel in the first and pullet in the second-prize pens being perfection. *Brahmas* were but moderate, and *Game* very poor. Some excellent pens of *Hamburghs* were shown, especially in the Silver-spangled class, the pullets in several of the pens being of rare quality. The Black *Hamburghs* were splendid specimens. The same *Bantams* were mostly good, and a most perfect pen of Black *Bantams* were first for Black or White, closely pressed, however, by a neat little pen of the same colour, to which the second prize was awarded. The Laced *Bantams* were good. *Ducks*, *Geese*, and *Turkeys* were good, but few in number.

Some excellent *Pigeons* were shown, most of the prizes being carried off by Mr. Ryds, of Rochdale.

DORKINGS (Any variety).—First, E. Ryder, Harrytown, Stockport. Second, Messrs. S. & R. Ashton, Mottram. *Chickens*.—First, E. Leech, Rochdale. Second, E. Ryder. Highly Commended, Messrs. S. & R. Ashton.

SPANISH.—First and Second, Messrs. Burch & Boulter, Sheffield. *Chickens*.—First and Second, Messrs. Burch & Boulter. Commended, S. & R. Ashton.

COCHINS.—First and Second, W. A. Taylor. Highly Commended, A. Bamford, Middleton; T. Maxwell, Salford. *Chickens*.—First, J. Nelson, Second, W. A. Taylor. Highly Commended, A. Bamford; W. A. Taylor. Commended, A. Bamford; H. Goulden, Bowdon; G. H. Wheeler, Middleton.

BRAMHMS.—Second, J. Lomax, Hollingworth. *Chickens*.—First, G. H. Wheeler. Second, J. Lomax.

GAME (Black-bronzed or other Reds).—First, J. Holland, Manchester. Second, J. Jackson, Bury. *Chickens*.—Prize, J. Jackson.

GAME (Any other variety).—First, B. Howard, Staley. Second, J. Shepley, Mottram. *Chickens*.—First, J. Holland. Second, J. Shepley.

HAMBURG (Gold-pencilled).—First and Second, T. Wrigley, jun.

Middleton. *Chickens*.—First, T. Wrigley, jun. Second, W. Parr. Commended, G. Newall, Manchester.

HAMBURGS (Silver-pencilled).—First, T. Maxwell. Second, Messrs. S. and R. Ashton. *Chickens*.—First, W. Parr. Second, J. Hey, Roe Cross.

HAMBURGS (Gold-spangled).—First, J. Wild, Ashton. Second, Messrs. S. & R. Ashton. *Chickens*.—First, Messrs. S. & R. Ashton. Second, W. Parr.

HAMBURGS (Silver-spangled).—First, T. Wrigley, jun. Second, J. A. Taylor. *Chickens*.—First, Messrs. S. & R. Ashton. Second, T. M. Ashton, Broadbottom. Highly Commended, T. Wrigley, jun.

HAMBURGS (Black).—First, G. Heathcote. Second, J. R. Booth, Broadbottom. *Chickens*.—First, J. Ashton, jun., Broadbottom. Second, W. M. Ashton. Highly Commended, T. Andrew, Hattersley.

POLANDS.—First, S. & R. Ashton. Second, T. C. & E. Newhitt. *Chickens*. First, W. H. Hey. Second, H. Hey, Ashton.

GAME BANTAMS.—First, W. A. Taylor. Second, A. B. Bailey. Highly Commended, J. Holland. Commended, Messrs. S. & R. Ashton.

BANTAMS (Black or White).—First, W. A. Taylor. Second, Messrs. S. and R. Ashton (Black). Highly Commended, W. A. Taylor (White).

BANTAMS (Any other variety).—First, Messrs. S. & R. Ashton (Silver-laced). Second, T. C. Harrison.

DUCKS (Aylesbury).—First, E. Leech. Second, M. Farrand, Dalton, near Huddersfield.

DUCKS (Rouen).—First, E. Leech. Second, Mrs. B. Howard, Staley.

DUCKS (Any other variety).—First, Messrs. S. & R. Ashton. Second, T. C. Harrison.

GEES.—First, E. Leech. Second, Messrs. S. & R. Ashton.

TURKEYS.—First, E. Leech. Second, E. Ryder.

SELLING CLASS.—First, W. A. Taylor. Second, Mrs. S. & R. Ashton

PIGEONS.

CARRIERS.—First, E. E. M. Royds, Rochdale. Second, H. Headley. Highly Commended, H. Headley.

POUTERS.—First, E. E. M. Royds. Second, H. Headley.

DRAGONS.—First, A. Parry. Second, E. E. M. Royds.

JACOBIANS.—First, E. E. M. Royds. Second, T. Newell, Ashton.

FANTAILS.—First, A. Parry. Second, Messrs. T. C. & E. Newhitt.

NUNS.—First, H. Headley. Second, A. Parry.

TUMBLERS.—First, H. Headley. Second, G. W. Hibbert.

OWLS.—First, H. Headley. Second, G. W. Hibbert.

TRUMPETERS.—First and Second, J. Lomax.

BARBS.—First, T. Newell. Second, H. Headley.

TURBITS.—First, H. Headley. Second, Messrs. T. C. & E. Newhitt.

ANY OTHER VARIETY.—First, E. E. M. Royds. Second, S. Harrison.

MOTTRAM. Commended, H. Arundale, Hollingworth (Baldpates).

SELLING CLASS.—First, Messrs. S. & R. Ashton. Second, E. E. M. Royds.

The Judges were Mr. James Dixon, Bradford, and Mr. E. Hutton, Pudsey.

BIDEFORD POULTRY SHOW.

THIS was held in conjunction with a Horticultural Show, on the 22nd inst. The following is the prize list:—

DORKINGS.—First, Rev. A. C. Thynne, Penwote, Stratton, Cornwall. Second, W. Ponnud, Bideford. Commended, Rev. A. C. Thynne.

SPANISH.—First, J. R. Rodbard, Wrington, Bristol. Second, Mrs. Buck, Moreton. Commended, — Joce, Bideford.

GAME (Black and Brown-breasted).—First, H. M. Bazeley, Bideford. Second, A. West, Stratton. Commended, — Joce.

COCHIN-CHINA.—First, J. R. Rodbard. Second, J. Dene, Horwood. Commended, Rev. C. W. Sillifant, Wear Gifford.

BRAMHAS.—First, R. Andrews, Barnstaple. Second, Rev. A. C. Thynne. Commended, Rev. C. W. Sillifant.

MALAYS.—Prize, W. Allin, East Putford.

HAMBURGH (Gold and Silver-pencilled).—First, J. Walter, Stratton. Second, J. F. Delmar, Stratton.

HAMBURGH (Gold and Silver-spangled).—First, J. F. Delmar. Second, J. H. Medway, Menheniot, near Liskeard, Cornwall.

POLANDS.—First, F. Barrett, Bridgerule. Second, F. W. W. L. Trewin, Kilkhampton, Cornwall.

EXTRA PRIZES.—Second, H. Leworthy, Newport, Barnstaple (Ancora).

ANY PURE BREED.—Single Cock.—First, J. Bines (Dorkings). Commended, A. West (Brown-breasted Game).—*Chickens*.—First, Rev. A. C. Thynne. Second, Rev. C. W. Sillifant. Commended, Rev. A. C. Thynne; — Joce.

GAME BANTAMS.—First, H. M. Bazeley. Second, Hon. G. Trefusis.

BANTAMS (Any other variety).—Second, J. D. Oliver, Bideford.

GUINEA FOWLS.—First, L. Lucas, Thunborough, near Holsworthy. Second, J. Turner, Abbotsham.

DUCKS (Aylesbury).—First, Miss Caddy, Parkham. Second, J. Pow, Bideford.

DUCKS (Any other variety).—First, J. P. Ley, Bideford. Commended, J. Bines; J. Heal, Buckland.

GEES.—First, J. Lyall, Bideford. Second, J. Heal.

TURKEYS.—First, J. Heal. Second, J. Pow.

PIGEONS.—Pouters.—Commended, W. Clarke, Bideford. *Fantails*.—Prize, Mrs. Buck. *Jacobins*.—Prize, N. S. Greet. *Common*.—Prize, J. Heal. *Amoud Tumblers*.—Prize, E. A. Bazeley. *Turbits*.—Prize, E. A. Bazeley. *Barbs*.—Prize, R. Atkins, Barnstaple.

JUDGES.—Capt. Adney, and Mr. G. P. H. Paty.

GUISELEY POULTRY SHOW.

THIS was held on Tuesday, August 20th, when the following prizes were awarded:—

SPANISH (Black).—First, J. Thresh, Bradford. Second, H. Beldon, Bingley.

PHEASANT (Golden).—First and Second, H. Beldon.

PHEASANT (Silver).—First, A. Smith, Silsden. Second, H. Beldon.

PHEASANT (Black).—First, C. Sidgwick, Kedgeley. Second, H. Beldon.

CHITTERPEAT.—First and Second, H. Beldon.

GAME.—First, H. Jowitt, Shipley. Second, H. Beldon.

HAMBURGH (Golden-pencilled).—First and Second, H. Beldon.

BANTAMS (Any colour).—First and Second, T. Burgess, Brighouse.

ANY OTHER DISTINCT VARIETY.—First and Second, H. Beldon. *Chickens*.—First, J. Riley, Haworth. Second, H. Jowitt.

DUCKS (Aylesbury).—First, Miss H. Newsome, Yeadon. Second, Miss A. Ranson, Yeadon.

DUCKS (Rouen).—First, C. Sidgwick. Second, H. Beldon.

PIGEONS.—*Croppers*.—Prize, H. Beldon. *Carriers*.—Prize, H. Beldon. *Tumblers*.—Prize, A. Smith. *Antwerps*.—Prize, H. Beldon. *Owls*.—Prize, H. Beldon.

WESTON-SUPER-MARE POULTRY SHOW.

THE Weston-Super-Mare Cottagers' Show, with its attendant exhibition of Poultry, was held on August 21st in a field near the Town Hall, which was kindly lent for the occasion by Mr. Glossop. This is the first Poultry Show at Weston-Super-Mare, and, from the goodly number that assembled, we may augur success for future exhibitions, which are proposed to be held annually in January.

The fowls were exhibited in Mr. Turner's pens, which are portable and commodious. The first-prize pen of *Spanish* belonging to Mr. Jones was much admired. Mr. Patton's first-prize pen of *Dorkings* well deserved its honours, and Miss Milward's second-prize pen was not far behind. The first prize for *Cochins* was easily won by her. *Brahmas* were fairly represented, and a six-months pullet in Mr. Hinton's pen was especially deserving of credit. He was also successful in carrying off the first and third prizes for *Polands*, the first for *Malays*, and second for a Malay cock in the Single cock class. The *Geese*, *Turkeys* and *Ducks* were not superexcellent.

The following is the prize list:—

SPANISH.—First and Second, E. Jones, Bristol. Third, G. Tonkin, Bristol.

DORKINGS.—First and Third, L. Patton, Tamton. Second, Miss J. Millward, Newton St. Loe. Highly Commended, L. Patton.

COCHIN-CHINA.—First, Miss J. Millward. Second, S. Onley, Cheltenham.

BRAMA POOTRA.—First and Third, H. S. G. Stephenson, Lymington. Second, J. Hinton, Hinton, Bath. Highly Commended, E. Pigeon, Lymington.

GAME.—First and Second, S. Dupe, Evercreech, Bath. Third, Rev. G. S. Cruwys, Cruwys-Morchard. Highly Commended, Rev. G. S. Cruwys.

BANTAMS.—First, Rev. G. S. Cruwys. Second, G. F. Tuckey, Bristol.

Third, E. Pigeon. Highly Commended, E. Jones.

HAMBURGS.—First and Second, S. Onley, Cheltenham. Third, W. Shaw, Bath.

POLANDS.—First and Third, J. Hinton.

MALAYS.—Prize, J. Hinton.

CRÈVE CŒUR.—Second, T. Wyndham, Salisbury.

SILKIES.—Third, Rev. C. Pearson, Woolkey.

TURKEYS.—First, L. Patton. Third, S. Lang.

GESE.—First, J. Coles, Worle. Second, L. Patton. Third, D. Huet, East Brent. Highly Commended, L. Patton.

CALL DUCK.—Second, Archdeacon Demison, East Brent. Third, J. Denison, East Brent.

ROUEN.—S. Lang, Bristol.

SINGLE COCKS.—First, S. Lang, Bristol (Game). Second, J. Hinton (Malay). Third, S. Dupe (Game).

JUDGE.—J. R. Rodbard, Esq., Aldwick Court, Wrington.

MEIGLE POULTRY SHOW.

THE third annual Show took place August 21st. The weather was all that could have been desired, with a north-westerly wind, and the sun shining brilliantly the entire day. There were 137 entries. The following are the awards:—

DORKINGS.—First, P. W. Ogilvy, Ruthven. Second, Mrs. Duocau. *Chickens*.—First and Second, P. W. Ogilvy. Commended, Mrs. Robertson, Conpar Angus.

SPANISH.—First, — Somerville, Edinburgh. Second, J. Kerr. *Chickens*.—First, Mrs. Anderson, Meigle. Second, — Somerville. Commended, D. Gellatly, Meigle.

COCHIN-CHINA.—Second, P. W. Ogilvy.

HAMBURGH.—First, J. Whitton, Ruthven. Second, R. McGregor, Kinneil.

GAME.—First, R. Robertson, Craigdochy.

BANTAMS.—First, P. W. Ogilvy. Second, D. Gellatly.

ANY OTHER VARIETY.—First and Second, K. Japp. Commended, D. Gellatly, and P. W. Ogilvy. *Chickens*.—Cup and First, P. W. Ogilvy. Second, G. Muirhead, Errol. Commended, G. Muirhead.

ANY VARIETY.—First, P. W. Ogilvy. Second, L. McDonald. Commended, P. W. Ogilvy.

ANY VARIETY.—P. W. Ogilvy. Second, Mrs. Robertson. Commended, A. Guild, Meigle.

DUCKS.—First, P. W. Ogilvy. Second, W. Kiddie.

GEES.—Second, P. W. Ogilvy.

TURKEYS.—First, Miss A. Kinloch, Kinloch. Second, P. W. Ogilvy.

RESTRICTED TO COMPETITORS RESIDENT WITHIN EIGHT MILES.

DORKINGS.—Cup, First and Second, D. Gellatly. Third, Mrs. Robertson. Commended, J. Duncan.

SPANISH.—First, D. Gellatly. Second, W. Thomson. Third, Mrs. Anderson, Meigle.

ANY OTHER VARIETY.—First, J. Whitton. Second, Mrs. Kidd, Balmachray. Third, G. Mustard, Alyth. Commended, Mrs. Tait, Meigle.

DUCKS.—First, W. Simpson, Cardean. Second, W. Kiddie, Braidstoun. Commended, Miss A. Kinloch.

CHICKENS FOR TABLE.—First, J. Croe, Meigle. Second, Mrs. Kidd, Third, D. Gellatly.

SELLING.—First, A. Robertson. Second, P. W. Ogilvy. Third, D. Gellatly. Commended, J. Elliot, Belmont, and D. Gellatly.

JUDGES.—Mr. Ridpath, Edinburgh; and Mr. Brown, Perth.

THE HAMBURG PIGEON SHOW.

IT may interest some of your readers to learn, that a Pigeon Show in this city attracted a very large number of pens, and an enormous concourse of visitors. It commenced on the 15th of August and lasted till the 20th. The number of entries in the catalogue was 1166, and nearly all the pens were filled. The catalogues, instead of being divided consecutively in classes of each variety, were arranged so as to show each amateur's contribution separately. The first on the list, and the only one whose name would be familiar to English readers, was the Prince of Prussia, who sent ten pens of choice birds of different varieties.

In attempting a description of the Show it is necessary to give a slight description of the place in which it was held. The Zoological Gardens at Hamburg are beautifully laid out to exhibit each variety of animal and bird in its natural condition as far as possible, and would give a good lesson to our Society in London. In the centre was erected, surrounded by a trophy of flags of several nations, a series of excellent pens, each furnished with a perch.

Taking the birds in order as the different varieties are appreciated with us at present, the *Carriers* were very poor indeed in quality, but an improvement on the German idea of them a few years since. The *Antwerps* were excellent and numerous. Two pairs sent by a medical man in Norway, were of the clearest blue ever seen. A good many showed the gullet of the Owl, but three or four pairs of a dark rose-wood tint, very small, very slim, with small pearly eyes, were the most blood-like looking birds possible. Those of them which were for sale were claimed immediately. The *Pouters*, according to German ideas, were all that could be desired. In my eyes the true English *Porter* was very badly represented, with the exception of some White hens, which were marvellous. I believe some few of them may find their way over. The *Brunner* and *Isabelles* were beautiful, numerous, and of every shade of colour. They attracted great attention and many of them were at once sold. The *Tumblers*, according to English ideas, resolved themselves into two pairs, one excellent exhibited by a private gentleman, and one mediocre exhibited by the Prince of Prussia. The classes of German *Tumblers* were exquisitely filled with Yellow, Silver, Blue, and Black *Magpies*, which have here a reputation for *haut vol*; also, with little feathery-footed mottled or rather speckled birds of excellent head and beak, and of all colours.

Of *Barbs*, much cannot be said, except that one or two birds of priceless value as regards beak were shown, but all were deficient in eye. There was not one really first-class pair in the Show, with the exception of one pair of *Yellows*, on which the owner would put no price. The *Trumpeters* would have been tolerable years ago, but in comparison with those lately imported by Mr. Bailly, and sold to Mr. Hedley and others, they would be nowhere. The *Jacobins* formed a very numerous class and exhibited every variety of colour and marking. One pair of excellent *Whites* with *Trumpeter* feet, two pair; very good but entirely Black, others Silver. Red, Blue, and Yellow some with *Trumpeter* roses; some Blue, Red, and Yellow with white tails. The *Nans*, Black, Red, and Yellow, comprised many very good birds, some of them very clean-cut indeed. *Spots* and *Hebeuts* were shown in great variety, and were much admired, as were also some beautiful *Frillbacks*, of a deep-shaded blue. *Fantails* were of every conceivable colour—Black, Blue, Red, Yellow, and White; also, White with black shoulders, White with black tails, red tails, and yellow tails. All of them were pretty but did not come up to our present standard of head and carriage. A collection of upwards of twenty pairs of so-called *Ice Pigeons* and *Mournd Pigeons* were great favourites from the very delicate shades of their colouring.

The *Archangels* were alone worth a visit, and exhibited every possible shading from deep black up to a slate colour, so delicate as to become almost a sky blue. They were shown also two pairs with white wings and red bars. The *Bagdais* were very good indeed, of a quality that has hardly ever been seen in England, some of them with beaks against which our *Carriers* would look short. The *Turbits* were great in number but woefully low in quality; *Owls* the same, with the exception of two pairs of *Yellows*, and two pairs of African. The *Swallows* were largely represented, the Blacks being the best. The *Starlings* and *Swiss Pigeons* exhibited great variety of marking. The named Pigeons were good; the *Priests* also of excellent quality but few in number; the *Shields* good, but also few. Several other varieties unknown as breeds to us were exhibited. Every bird seemed in perfect health, and rather an unusual circumstance at a Show, all the birds seemed really paired.

One curious feature of the Exhibition was, that at eleven o'clock on the Sunday morning between two and three hundred Pigeons, many of them *Antwerps*, were set loose in the centre of the gardens to find their way home. With hardly an exception they flew to a great height and then began to circle, by degrees they thinned, and then those that remained seemed to form themselves into flocks and take their departure. At this time it is computed there were forty thousand visitors,

and it is said some of them had been there since eight o'clock waiting. The attractions of the Pigeons seemed immense, and in many a group of some half dozen stolid staid-looking men, one would have imagined that the fate of kingdoms was being discussed, rather than the produce of some particular bird.

ANOTHER WARNING.

IN the month of January last I advertised in your *Journal* for some poultry. Amongst other replies, I received one from a W. F. Josling, of Writtle, Essex, and it was agreed that he should send me some birds on sight, provided I sent him a post-office order for their value—viz., 35s. Should I not like the birds I could return them, and he would return the money. I sent him the post-office order, but from that day to this I have never received either the birds or the money back. I allowed the matter to stand for some months, and I then wrote him to send back the money, but received no answer. Under these circumstances I wrote to the Superintendent of Police at Chelmsford, and his reply confirmed my suspicions. Deeming it but right that the poultry-dealing public should be put on their guard, I have enclosed you the letters.—JOHN STUART, *Thistlebank, Helensburgh.*

[Why did you not do what we have repeatedly advised others to do—either require the poultry to be first received by you, or make the post-office order payable ten days after date, so that you might stop its payment if the poultry were not previously received? We have no sympathy for those who choose to run the risk of being defrauded by strangers.]

DUCKS POISONED.

A FEW days since Mr. Joseph Wyles, of Welby Warren, sustained a somewhat serious loss in his poultry-yard, by the sudden and, at that time, unaccountable death of a large number of fine Ducks. Being utterly at a loss to imagine how the birds came by their death, he decided to call in the professional aid of Mr. Batchelder, veterinary surgeon, of Grantham, who, having made a *post mortem* examination, decided to forward the intestines of some of the birds to the eminent analyst of Guy's Hospital, Professor A. S. Taylor, a report of whose analysis has just been received by Mr. Batchelder; from which it appears that he found the symptoms identical with irritant poisoning. Applying every known test for the detection of any mineral or vegetable poison, he was unable to discover the presence of any such body. In the food given to the Ducks, which consisted of ground wheat, the Professor discovered the presence of the black seeds of the Corn Cockle [*Agrostemma githago*], in considerable quantities, whilst in the intestines of the birds he also found partially digested food of precisely similar description; and it is to the presence of the Cockle that he ascribes the cause of death, and not owing to the presence of any intentionally administered poison. He states that personally he has had no experience of the effect of these seeds upon animals, but that scientific authorities of repute assign to the seeds of the Corn Cockle a noxious irritant action on animals, especially on birds; and that the seeds, when in large quantities, act like a poison and destroy life in a few hours. The word "cockle" when used with reference to this seed is not understood in this part of England, the seed being generally known by the name of "corn popple."—(*Grantham Journal.*)

PROTECTING HIVES—BEE FLOWERS.

THE roof of the cheese-box hive protector (described at page 129) can easily be rendered waterproof by a coating of thick coarse paint. As I was in urgent need of a cover for my hive, I did not paint it, fearing the effect of the strong smell upon the bees. I have, however, made it thoroughly waterproof, by covering the roof with a piece of old passage cloth. I cut a circle whose diameter was 2 inches larger than the top of the cheese-box, and bending it over the side tacked it round the edge. This not only makes it completely waterproof, but also adds to its neatness, and a coat of paint on some fine day in winter will make it all right. The swarm in this box now weighs fully 30 lbs. nett.

In looking over some old Numbers of the *Journal* for hints on bee-management, I find one of your contributors stating again and again, that it is useless cultivating bee-flowers, that

bees obtain their food from the fields. He, indeed, recommends bee-keepers to sow twenty acres of white clover, and the same quantity of buckwheat, advice which need never have been given, for ninety-nine out of every hundred bee-keepers could not adopt it if they would, and the hundredth would not if he could.

From my own observation this summer, I am convinced that much may be done to aid our little friends in their work. I can strongly recommend every bee-keeper to sow as much Canterbury bell as he can find room for. I have not noticed this plant in any list of bee-flowers that I have seen, but I was so impressed with the appreciation of a large bed of it, shown by my bees this summer, that I have now some thousands of seedlings coming forward for blooming next year. It was delightful to hear the pleased, self-satisfied hum of thousands of busy workers, as they flew from flower to flower, and to watch them revel in an intoxication of delight, in the golden dust which they found so plentifully in every bell, bearing off their sweet prize to the hives close by, and returning to the feast again with an appetite that never said, enough. "Thanks, not any more," is an expression unknown to bee etiquette.

In watching the labours of bees in borage and mignonette, I have observed that on the former hardly a bee will be seen with any propolis on its legs, while on the latter hardly a bee will be found without some. I think it would be valuable to many, if some of your contributors would furnish a list of the best bee-flowers that bloom from April to September, distinguishing, if possible, betwixt those which furnish honey only (as is apparently the case with borage), those which furnish propolis only, and those which supply both.—JOHN O'GAUNT, *Lancaster*.

HAVING seen in your Journal of August 15th, page 129, a mode of protecting hives, I take the liberty of offering to the writer's notice, and that of your other readers, a mode of protection which I think is, perhaps, even more simple and convenient.

I procure an empty-flour barrel (price 6d.), this I cut to the height of 20 inches, having first secured with broad-headed nails, clenched on the inside, the wooden hoops which are at the top and middle. My cover now presents somewhat the appearance of a drum with the ends out. This, placed over, or rather round, my flat-topped hives, rests on the corners of the floor-board, and allows a free circulation of air inside, an important point in warm weather. A flat milk-pan placed on the top secures from rain, and by its weight keeps the cover in its place. This is easily removed, and at once gives access to the glass or super on the top.

Certainly the cover above described is not very sightly, but a little green paint on the staves, and white on the hoops, will improve its appearance, and it will be found, I think, easy to make, convenient, and effective.—A SHROPSHIRE BEE-LOVER.

OUR LETTER BOX.

CRÈVE CŒUR'S FOOT SWOLLEN (*C. G.*).—It is a much commoner complaint with Dorkings than with any others, although all heavy birds are subject to it. It arises either from a bird flying from a high perch and bruising the ball of the foot, or from a small stone having penetrated the skin on some similar occasion. In either case the swelling should be pointed and opened, and the bird should be shut up where it will walk on grass only. After it is opened the foot should be carefully wrapped up to exclude both dirt and air.

FEEDING TIMES FOR FOWLS (*E. B.*).—A good meal in the morning, a very moderate one at midday, and another good one two hours before dark. The appetite of the birds must be your guide as to quantity.

TOULOUSE GESE (*Mrs. C.*).—Your need not be alarmed. Your neighbours are already trying to invent something to prevent the sale of your Geese. We prognosticate that you, being larger than theirs, will have the call of the market; and if fed like theirs, we know from long experience that their flesh will be quite as delicate in flavour, if not more so, than that of smaller specimens.

HASTINGS POULTRY SHOW (*Fair Play*).—The treatment of your bird was most unjustifiable. We can imagine nothing that would warrant a man in bleeding a cock in such a barbarous manner; but well-meaning ignorance may excuse an error in judgment, and the man in charge may have done foolishly with good intention. As a rule, the acting committee of a poultry show engage a man who is supposed to be competent to superintend in every way, both as regards feeding and treatment. This absolves them; but it is to meet such a case as yours the rule is introduced which disavows beforehand all liability of every kind. Every one who exhibits a bird or a pen of birds does so subject to a code of rules, of which this is one, and there can, therefore, be no claim against the committee. It will, however, alter the complexion of the case if you can prove wilful and malicious damage committed on your property by a man in their employ.

DOUGLAS'S MIXTURE (*H. W.*).—It should be 1 oz. of sulphuric acid be weight. We are not inclined to think it would be injurious to non-moulting fowls; but with poultry, as with ourselves, we prefer to let well alone.

TUMOUR ON COCHIN'S BREAST (*A. E.*).—We advise you to open the tumour on the breast of the fowl, and, if there be anything to remove, to remove it. They are seldom filled with water only, but have something more solid in them. If the operation is deferred, it is more than probable the tumour will adhere to the breast. At his present age it may be removed with little risk and merely nominal pain. It will also heal much better now than afterwards.

HAMBURGH'S DEAF-EAR BECOME STREAKED (*Gloucestershire*).—We should be inclined to think that when the moulting is over the cock will recover his deaf ear. We are often plagued in this way with Spanish. They are perfect in May, doubtful in June, middling in July, worthless in August, and first-rate in November. All white faces are affected by the condition of the body. Stimulating food, violent exercise—anything that causes an upward rush of blood, will interfere with them. There is a red skin inside the white one. The wax was doubtless a scab formed on the face and the white skin, which it may have injured. Or it may have been caused by the heat. They are very fond of pecking the cock's face. We should expect to see him regain all his beauty. It will be well to keep him away from hens at present.

MATCHING GAME BANTAMS FOR EXHIBITION (*Old Subscriber*).—A prize is awarded in Game Bantams, as with any other fowls, to the most meritorious pen. Matching is essential, and it would, of course, be sought by an exhibitor; but the fact of all three birds having a doubtful merit, or a positive defect, would not be lessened in its consequences by their all having it. We prefer a red ear-lobe in a Game fowl.

CROSSING FOWLS (*N., Liverpool*).—Your fowls are two-thirds Dorkings. If you continue they will be three-fourths, and if you go on again many will come pure Dorkings, so far as appearance is concerned. They will, however, always be liable to throw back, and to produce part Brahmas, when Dorkings are most needed.

ALLENTON POULTRY SHOW.—The first prize for Golden-spangled Hamburgs, and the first prize for Fantail Pig eons, was awarded to T. C. and E. Newitt, Epworth, near Bawtry.

DUBBING SCISSORS (*G. D.*).—The scissors used by groomers for clipping horses answer well for dubbing, as they have the necessary curve. Saddlers and cutlers all sell them. Priest, in Oxford Street, London, sells excellent ones.

DIARRHŒA IN PIGEONS (*Orl.*).—We have not heard that this disease is more prevalent than usual among the fancy stock. All Pigeons kept in confinement are liable to diarrhœa, especially Pouters. When Pigeons fly about unrestrained they secure themselves from disease. Cleanse and limewash their house thoroughly; well sprinkle the woodwork with chloride of lime. Feed the birds (crum them if necessary), only on old beans. Put down their throats each day three bits of old mortar, each the size of a pea. It would be well to put the birds into a fresh house for a while; at any rate, separate the diseased from the healthy. But try to remove the cause, then you will remove the disease.

PIGEONS DISEASED (*J. T. E.*).—Your Pigeons have the wet roup owing to cold or damp. Probably they are confined, and their loft is draughty, and they have little sun. Give them three pills of cayenne pepper and bread daily, and keep them warm.

CANARY NOT SINGING (*L. B.*).—Change the food of your Canary which has not sang for two years, giving it mawseed with hemp, boiled egg chopped fine, and plenty of green meat; also, change the situation, and place the cage where another Canary is in song. Many German Canaries lose their song after the third year.

CANARY WITH LEGS CRAMPED (*S. H. H.*).—Your bird, we fear, is too old to derive any benefit from our advice. Hold the legs up to the thigh in a cup of warm water for two or three minutes occasionally, and place a saucer of water in the cage on a warm day for it to bathe in, also change its food. Give millet and mawseed mixed with canary seed and boiled egg chopped fine.

A DRONE WITH A WHITE HEAD (*R. S.*).—The insect you enclosed is very remarkable, from the colouring matter being almost entirely absent from both the simple and compound eyes. It is not unlikely that the unfortunate drone was afflicted with partial, if not total blindness, resulting from this defect.

HIVES WITHOUT BEES (*James Smith*).—It is just possible that the population of the three colonies, now without bees dead or alive, may have dwindled and ultimately become extinct, either from the death of queens or from foul brood. We should, however, be much more inclined to believe that they really perished during the winter, and that the dead bees were removed by scouts from other hives, whose presence also may have deceived you into the belief that the stocks were still tenanted long after all their inhabitants had become extinct.

UNITING STOCKS (*A. and E.*).—If, as we imagine, the three nuclei are queenless, the union will be readily effected by simply lifting out the combs, bees and all, sprinkling them with peppermint-scented syrup, and placing them in a full-sized hive. A day or two after, and when any excitement has subsided, a queen may be added, and as under these circumstances she will most probably be well received, she may be simply immersed in liquid honey slightly warmed, and dropped into the hive through the hole in the top, or introduced with all the precautions which you will see described by Mr. Woodbury, in our Journal next week. It is so difficult to insure the safety of an Italian queen under these circumstances, that we have abandoned the practice altogether.

REMOVING SUPERS (*S. E. F. D.*).—A super should be taken off when it is filled, or as soon as the honey harvest is over; but this varies so much in different localities, and even in the same locality in different seasons, that no precise rule can be laid down. When honey is sealed over in the combs at the back of a hive, the probability is that the bees are well provided with food, but it by no means follows that the whole of the combs are sealed.

HUMBLE BEE (*J. R. Pearson*).—The union of the queen and drone humble bee is but seldom seen; Mr. F. Smith, the eminent hymenopterist of the British Museum, being so far as we know the only British observer who has previously witnessed it.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	SEPTEMBER 5—11, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.		Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.		m.	s.	
5	TH	Winchester Horticultural Show.	70.1	47.1	58.6	16	20	45	38	46	after.	15	41	0	0	1	18	248
6	F	Workshop Horticultural Show.	69.8	46.4	58.2	18	21	5	36	6	56	41	55	10	8	1	38	249
7	S	Royal Horticultural Society, Promenade.	70.2	47.5	58.8	18	23	5	33	6	33	2	40	11	9	1	58	250
8	SUN	12 SUNDAY AFTER TRINITY.	69.4	47.9	58.6	18	24	5	31	6	33	3	morn.		10	2	19	251
9	M		69.0	48.1	58.5	17	26	5	29	6	13	4	32	0	11	2	39	252
10	TU	Crystal Palace Autumn Show opens.	69.5	45.8	57.7	19	28	5	24	6	48	4	39	1	13	3	0	253
11	W	Nottingham Horticultural Show.	68.6	46.6	57.6	10	29	5	24	6	19	5	39	2	13	3	21	254

From observations taken near London during the last forty years, the average day temperature of the week is 69.5°; and its night temperature 47.1°. The greatest heat was 81°, on the 17th, 1843; and the lowest cold 28°, on the 11th, 1860. The greatest fall of rain was 1.27 inch.

SPIRAL CORDONS.



N intelligent correspondent of this Journal seems to be of opinion that spiral cordons, of which I wrote at page 73, would be difficult to syringe or water at the roots separately.

whenever so required, on account of the various periods at which the fruit matures. In practice, however, I have never, during the many seasons these cordons have been fruited here, experienced any difficulty on this account. I have always found it easy to avoid syringing such spirals as had nearly mature fruit on them—that is, a partial wetting has been all that was allowed to fall on the surface of ripening Peaches.

Such partial syringing I found of use in keeping the fruit clean and fresh. I must, however, say that a very great annoyance results from excessive or unskilful syringing; for whenever the full force of the engine or hand-syringe has been directed laterally against any fine specimen, it was certain more or less to loosen the fruit's hold, and make it drop before its time: so much so that I have ordered syringing to be discontinued during this period of so many ripening fruits, to be resumed whenever a lull occurs in the Peach harvest. It is most trying to gather basketsful of fine fruit from the floor of the orchard-house every morning. An immense loss occurs in this way.

As to syringing spiral cordons, there is no more difficulty in so doing than in dealing with several rows of pyramids in pots closely touching each other, and there are various obvious ways of preventing the chief force of the water from falling on any which have fruit nearly ripe. On the open wall Nature is by no means particular in these matters; but I readily allow that trees under glass, whether border or pot, are living in an artificial state, and require different treatment.

The whole question of syringing involves many points of interest to the gardener. As to expecting to do more with the red spider than to wash this pest away by mechanical violence, it is absurd, for this mite thrives in water, one may almost say, and if we syringe these insects off the leaves, they fall on the border unhurt. Nothing really destroys them which does not involve the ruin of the foliage. A deceased friend, a laborious and scientific entomologist, used to declare that the red spider required as strong a poison to kill it as a human being. Many experiments on their vitality made last season by myself and a clever chemist, with solutions of carbolic acid, resulted in failure. As to sulphur and ammonia, unless presented under dangerous forms, they are useless. Washes of soap or size would probably do something, by mechanically fixing

the insect for awhile only, but these also clog the stomates of the leaves.

Being convinced that red spider most readily fastens on trees which, either from want of root-action, or from exhaustion of vitality in any way, push forth weak leaves, I have endeavoured to promote a healthy foliage by all the means in my power. One very efficacious agent to attain this end is an abundant and regular system of watering at the roots. Many of my trees are now planted in the borders, simply because no dependance can, in general, be placed on a regular or sufficient supply of water being given to potted trees. By urging on this important point this summer, aided by the frequent saturation of the atmosphere, very little syringing has been required, and I have never had such fine fruit. Early York Peaches were nearly 9 inches in circumference; Acton Scot quite as large as fine Royal George; immense and juicy Early Silver; Stanwick Nectarine cracking as usual, but of a size never before seen by myself or by others here. I notice some splendid Victoria Nectarines swelling fast, and Princess of Wales Peach, also very large. Early Albert Nectarine (one of Mr. Rivers's seedlings), is heavily laden, and very fine indeed. Souvenir de Java is a new and gorgeous early Peach. A basket of exquisite Peaches is, as I write, on its way to adorn the dinner-table of the bishop of the diocese, who is in the island. I do not think this basket could easily be equalled in Paris or London, and all this proves clearly to me, at least, that orchard-house trees, in pots especially, have not in general anything like the amount of watering at the roots which they need at certain periods.

Watering is, no doubt, a heavy tax in all cases, except where the supply is ample, and I have not seen anywhere a better plan to economise time and labour than that I have long adopted, which consists of a stout central gutter, laid at a regular level, from which short lateral gutters, at about every 2 feet, lead to the trees. The supply is easily regulated: a little clay in the aperture of the lateral gutter shuts off any particular tree, and the main stream is readily conducted in any direction. In a few minutes my new house is completely watered, while others with expensive hose are almost hours in producing the same result. This method has been adopted by many of "my pupils," and notably by one at Hampton Court, who has zinc gutters perforated with holes, which he can stop by merely dropping a stout nail in them.

There is, therefore, nothing to dread on the score of spiral cordons having too much root-watering at any particular time: if there were, it could be obviated by planting groups of three instead of five trees, and by having these of trees of similar or nearly similar periods of ripening their crop.

These groups of five, however, are magnificent to look at, and I have no doubt whatever will supersede all other border trees, except diagonals. This year I have allowed extra growth in the shoots, and given abundant water, and this has afforded a stimulus to many an overworked tree.

Probably we have been too ready to dispense with those heavy and saturating rains, which, under the power of

electricity, perform important functions in vegetable physiology. We must not entirely shut out our trees under glass from such influences. Even acting mechanically they wash the foliage clean from insects and other pests. In hot weather evaporation is rapid from the whole extent of foliage, and an equilibrium is soon restored between root and leaf, unless under unnecessarily severe conditions.—T. BRÉHAUT.

NEW, EASY, AND EFFICIENT MODE OF DESTROYING WASPS.

Wasps are now rather plentiful. I have for several years adopted a very simple, but very effectual, plan of getting rid of their nests. When I find a nest I select the noon of a hot sunny day for my operations. I procure a very strong solution of cyanide of potassium, and I saturate a piece of lint, about 3 or 4 inches square, with the solution. This lint I quietly place at the outlet of the hole leading to the nest on the ground, in a bank, or elsewhere. Nothing more is requisite. Every wasp that arrives at the hole on its descent alights on the lint, and, after one or two gyrations, drops over the edge of the lint into the hole, dead, or else dies upon the lint—not one escapes. After sitting down by the side watching the operation for about ten or fifteen minutes at most, the number of wasps arriving home becomes very much lessened, and then only a few odd ones arrive, I then dig out the nest. All are destroyed. There is no fuss, no risk of being stung, as every wasp coming home falls on the fatal lint, and has no escape. The evaporation of the cyanide is very rapid, and the air all around the hole is tainted, and the wasps seem fascinated by it, as I never see any turn away; they look as if they must settle, and when once they alight they have no power to raise themselves, the use of the wings is gone, and they are soon dead from the inhalation of the cyanide.

This is a very simple way of destroying the nest, because if you do not wish to take the nest, you may leave the lint there, it will destroy all the nest, and will do no harm to anything else.

When the nest is in a tree, I generally go in the evening, and hold the lint soaked in the cyanide under the bottom hole. The wasps soon begin to drop out, first one by one, then in a regular shower. Of course caution must be used to avoid the inhalation of the cyanide, but as so little is required, it is not very probable any accident will result from the proceeding.—AMOS BEARDSLEY, *Grange, Lancashire*.

ROSES ON THE MANETTI STOCK—MARÉCHAL NIEL ON A BRIAR STOCK.

I WILL take the last first. I have now two plants of Maréchal Niel budded on Briars growing well and beautifully. One is a tall standard referred to by "D.," the other is a dwarf bought of Mr. Keynes with five others, excellent specimens, having firm wood averaging 44 inches. Four of the Briars have died this summer from winter injury, the other is alive—scarcely alive. It is not the fault of the Maréchal. It is my fault. I wished to try the hardiness of the Maréchal, and so I did not tie it up when the first frost set in, but I did so before the second frost, but it was too late. I consider it a very hardy yellow Rose, and the Briar a suitable stock. I have the mother (Isabella Gray), on its own roots in the open champagne, a strong-growing stalwart tree with two buds. I am interested to see them bloom side by side. My two successful plants of the Maréchal are neither of them against a south wall—the best place. One is 6 feet from a south wall, and the other 6 feet in front of my little viney. I shall probably move them to a south wall, or at any rate buy some for the purpose. However good a yellow Rose may be in the open ground, it will be better under a south wall, and more golden. I do not remember advising (page 162), "HUMBLE COTTAGER," to plant Maréchal Niel. It is at any rate a mistake. I meant to write Maréchal Vaillant. In passing, I may mention, "D." brought here two perfectly golden blooms of Bouton d'Or, as golden outside as in—gems of great beauty, but not very large.

Now, a few words about the "Briar, *versus* Manetti." "D." of Deal, has said just what I should have said had I noticed Mr. Cant's observations. Mr. Taylor lives at Fencote, Bedale, Yorkshire, just ask him his experience of the "enduring nature of a Briar stock," as compared with a Manetti Rose,

during the winters of 1860 and 1866. He lives in the fine vale of Mowbray, perfectly adapted to Briar Roses.

I have always found the Briar an admirable stock for summer Roses and Tea-scented Noisettes, both of which do equally well, or better, on Manetti or their own roots, and are more easily defended on them. It is fair to say that Roses may be grown well on a Briar in sandy or chalky soil, provided people will go to a great extra expense.

Now, one word for "BETA." I do not advise inexperienced persons to move Roses, especially travelled Roses, so early as I have done. "BETA" left out the word Manetti before Roses, which seems to make me advise the practice for all kinds of Roses. Now, with regard to the fresh-planted Manetti Roses. I bought on the 5th of August last, 285 Manetti Roses, and Mr. Gill gave me three plants over, making 288. They have all taken, Louise Margottin is in complete new foliage expanded, and all will be new-foliated within a month, and I expect to bloom many of them, at least some, this fall. Surely I need not say that I never write on any subject that which I do not believe to be most strictly veracious.—W. F. RADCLIFFE, *Rose Hill*.

ABOUT THE LAND'S END.—No. 3.

I HAVE found in the old Cornish language more than usual attractions, as the readers of "our Journal" may have appreciated from my frequent recurrence to that language's vocabularies. It is not merely because some of the names of our fruits and plants are traceable to it, nor because it is melodious—on the contrary, it is harsh and rough, but it is because its epithets and proper names are so very much more appropriate and expressive than our own. Take, for example, the names of the months. No names can be more inapplicable and destitute of meaning than those by which we distinguish them. Thus, on what possible foundation can a Briton justify calling the past month August? It was all very well for a Roman to do so, as he wished to propitiate an emperor. Moreover, why should we still call four months the seventh, eighth, ninth, and tenth, when they are in truth the ninth, tenth, eleventh, and twelfth? Our Cornish forefathers adopted a nomenclature which could not be so disorganised, unless by some convulsion our globe's axis was changed. They called January, *Miz-gen ver*, the cold-air month; February, *Miz-luervel*, the whirlwind month; March, *Miz-merh*, the horse month; April, *Miz-Ebrall*, the Primrose month; May, *Miz-mé*, the flowery month; June, *Miz-Ephan*, the summer month; July, *Miz-gor-ephan*, the chief summer month; August, *Miz-east*, the harvest month; September, *Miz-gweddu gala*, the white straw month; October, *Miz-hedra*, the watery month; November, *Miz-diu*, the black month; and *Miz-kevardiu*, the month next after the black.

One of the objects attracting me to St. Michael's Mount was to see Opie's portrait of the last talker of this language, Dolly Pentreath, but it is gone. Murray's Handbook (I look upon Murray as almost infallible) says it was there in 1865, Where is it now? On another day I journeyed to St. Paul, in the God's Acre of which parish Dolly's bones are stored. In the wall of that enclosure a stone is inserted, to the memory of Dolly, and its inscription is in English and Cornish. It bears the date of its erection, too, 1860, and contains two mysteries, for which I have sought explanation vainly. Why did Prince Louis Lucien Bonaparte co-operate with the vicar in erecting that stone? And why was the twelfth verse of the 20th chapter of Exodus inscribed upon it? She was not their mother, nor is it even known whether she was any one's mother.*

Although Cornish is altogether abandoned as a spoken language, many of its words are still mingled with English by the peasantry. Thus, in journeying from St. Paul towards the Land's End, noticing a Mountain Ash, I inquired what the Cornubians call it, and found that they name it the *Cair* tree, literally "the berry tree."

Among the very few shrubs at the Land's End—there are no trees there—I noticed the Tamarisk, and *Fuchsia Riccartonii*, but the latter was stag-headed, for the Atlantic gales swept over it so soon as it peered above the granite blocks which formed the low garden wall. Even the taller Furze (*Ulex europæus*) is absent from the soil strewn with granite blocks, as if sown broadcast by a giant, but the dwarf Furze (*U. nana*) is abundant, is now in full bloom, and not higher than the Heaths among which it is crowded.

* One of the printers in our office states that his grandmother's sister's husband was Dolly Pentreath's grandson.—Eds.

Nowhere do the Heaths flourish more, or bloom more brightly than in the moist atmosphere of the southern Cornish coast, and it has been said that one of its parishes, Mylor, is the only one of the 11,700 parishes of England, in which all five of our native Ericas, as well as their half-sister Calluna, can be found native. Erica vagans, the Cornish or Geonnelly Heath, has its special residence in that district of the Lizard, which I dare say very few know, is a true Cornish name, *Liasherd*, much thrust out, as is the land seaward. It was once thought, and Murray even retains the error, that this Heath is only found there in the soil resting upon the serpentine formation; and as a serpentine contains about forty per cent. of magnesia, it was thence concluded that abundance of magnesia is necessary for its growth. This is only another illustration—

"How man too rashly often deems
Of that which is from that which seems,"

for Erica vagans is found far from any serpentine formation on Connor Down, in this county, in Glamorgan, Portugal, and North Africa.

How joyously fresh, also, do the Ferns look here—those gentles of the Cryptogamic world—and some of the rarest have their whereabouts at the Land's End. *Asplenium marinum*, fine and abundant, is in the coves around. Who's plants were for sale near the very small inn, the actually last inn in England, although another at Sennen, half a mile inland, has on the east side of its sign, "The Last Inn in England," and on its west side, "The First Inn." Then, *Asplenium lanceolatum*, which is specified in our English floras as "very rare," and so it is in other parts of this island, but about Penzance it may be described quite as correctly by the words "very abundant." In more northern districts I never saw it so large and vigorous, except when grown in the shaded part of a greenhouse, the air in which was well charged with moisture. I cannot but think that that rarest and most graceful of our Ferns, the Maiden-hair, is to be found on the rocks of the very many coves and caverns between the Land's End and Godfrey Island. The belief here is, that it is growing nowhere except in a damp cave on the beach at Carrack Gladden, about midway between St. Ives and Hayle. Mr. Woods, a Sussex botanist, writes thus about this Fern, "I walked from St. Ives as far as the ferry towards Hayle, but, instead of crossing to the Causeway, I landed on the Towns, and on that day and the next had a good hunt over them. I hunted also the Black cliff, and the cliffs by Gwithian for the *Adiantum*, but in vain. It seems to grow on a tufa formed by the action of the water on the shelly sand, but I hardly found any such combination of shade and moisture, as to promise well; I was, however, prevented by the tide from coasting the whole length of the rocks at Gwithian." It is such hindrances, that, in my opinion, prevent this *Adiantum* being found elsewhere than in that Carrack Gladden cave. Casual visitors must always be so restricted in their botanical searches, but if some sufficiently qualified resident would pursue the research, I believe it would be found in other cavities along that space of coast. We are told by our comprehensive friend, "Murray's Guide," that the cave at Carrack Gladden, "until lately was festooned and lined with Maiden-hair; but the Ferns have been, to a great extent, destroyed by the 'natives,' for the purpose of increasing the value of the plants they have for sale. The cave might, and should be, closed by an iron grating." That it does grow elsewhere in the British Islands, than in that cave, is certain, for it has been found at Barry Island, and Port Kirig, on the coast of Glamorganshire, on the southern of the Arran islands, and on the banks of the Carron.

Of the other native Ferns which are rare, *Hymenophyllum tunbridgense* is to be found at Carn Galva; *Ophioglossum vulgatum*, at Phillack, and the Scilly Islands, the proper name of which is *Syllch*, or islands dedicated to the sun.

I will but mention one other rare plant, rather abundant near Penzance, *Sibthorpia europæa*, the Cornish Moneywort. It is truly a graceful little plant, its trailing stems and its delicate pinky white flowers are now in full vigour.

If any reader of these notes wishes for a full enumeration of the plants, "about the Land's End," it is to be found in a list published by Dr. Montgomery, of Penzance, who is not only, as I have good reason to testify, an able physician, but a skilled botanist. That list was originally published in the "Reports of the Penzance Natural History and Antiquarian Society," one of the many associations for the promotion of science which characterise this county. This society was formed in 1839, and still is active. A complete set of its Reports can

now be met with very rarely. In that now before me, I see a list of "The Mosses about Penzance," with full directions where to find them, being a result of the researches of Mr. Alfred Greenwood; "A List of the Lichens," found in the same neighbourhood, by Mr. Pentreath; "The Wild Flowers and Ferns of Scilly," by Miss L. and Miss M. Millett; "Fungi of the Neighbourhood of Penzance," by a brother of those ladies; and a list of some of the Algae, by Mr. Ralls, who resides at Penzance, and is well known as one of those who are best acquainted with our native plants.

The Royal Geological Society of Cornwall is another justly distinguished association. Its museum is one of the best in the United Kingdom, and will now soon have a worthy abiding place. This society was instituted at Penzance, in 1814, at the suggestion of the late Dr. Paris, who then resided there. His work on "The Soils of Cornwall," would entitle him to a notice in notes "About the Land's End," even if he had no other claim. He wrote also a life of Sir Humphry Davy, who was a native of Penzance, and the house of whose birth has now become most inappropriately a second-hand furniture shop, for Sir Humphry's world-wide fame is founded on no second-hand researches. His "Agricultural Chemistry" is no exception to this claim of originality, for although Lord Dundonald had pointed out the importance of applying chemistry to the cultivation of the soil, yet Sir Humphry was the first to effect that application. Between the years 1802 and 1812, he pursued those researches which one year later he published as "Elements of Agricultural Chemistry," but they are equally illustrative of horticulture, and it has been observed, by one on whom his mantle has descended, that "the single work of Sir Humphry Davy is nearly all that chemical science has, in this country, been induced to contribute to the advancement of agricultural theory during the first forty years of the present century." But the application of chemistry to the culture of the soil is not the only exertion of his intellect which entitles Sir Humphry to the regard of the readers of "our Journal," for in one of his letters he says, relative to the preservation of eggs for incubation, "It will be a great point if the principle of life can be made to sleep in the ova of birds and fishes, as it is in the seeds of plants. I wish Mr. Knight would try if eggs that have been kept three or four months in lime water, will have retained the vital principle. I have more hope in electrical than in chemical interferences—such as covering eggs with resin or varnish, or exclusion of the air by machinery. Lime water seems to prevent the action of air on the egg by its electrical effects."—G.

A BASKET OF FRUIT.

At a local horticultural show a prize was offered for the best "basket of fruit." Does this mean a very large basket, having within it ten or twelve smaller baskets containing the fruits, or does it mean one of moderate size, holding its own contents? A few words in your next would greatly oblige—A GROWER OF FRUIT, *Chatteris*.

[This is one of many instances in which a want of definiteness is much to be lamented. A washerwoman's clothes-basket and a punnet equally come within the definition of "a basket." A basket containing other small baskets does not come within that term, for they are plural. Then according to common acceptance, though not correctly, "a basket of fruit" would include a basket containing many kinds of fruit, as well as a basket containing one kind.]

PIGMY VINES IN POTS.

HAVING been on a tour through Ireland, and having while there an occasion to call at Newcastle, the seat of the Hon. L. Harmao King-Harman's, I there saw a very excellent mode of growing Vines in pots, which is, I believe, if not new, practised but very rarely.

Meeting with Mr. W. Henderson, the very able gardener there, he wished, he said, to show me some "new plants" in one of the vineries. I there saw on a wide back shelf two rows of Vines in pots, the back row being white Grapes, while those in the front row were all black. The two rows thus formed a ribbon border, the effect of which was really excellent.

"Nothing in all that," say my readers. No, but when I say that the Vines alluded to were all cuttings planted last February, in four and six-inch pots, grown and fruited in the same

pot, and placed on the dessert-table in the early part of July, the same readers will agree with me that there was not much time lost, and it certainly is a system preferable to drawing a Vine through the aperture in the bottom of a large pot, or growing Vines a year previously to their being fruited, and in such pots as require two men to lift them.

The Vines grown in these small pots were from 1 foot to 18 inches in height, bearing from one to four bunches of well-ripened, and beautifully-coloured Grapes. What magnificent little bushes these would be, laden with their rich fruit, to associate with Mr. Rivers's "wee" Peach and Nectarine trees. Indeed, by proper arrangement with such trees as these, the dinner-table might have them as a decoration.

Not having seen before such plants laden with such fine fruit grown in such small pots, and that, too, in such a short space of time, I could not help thinking that this mode of growing Vines would be very remunerative to market gardeners and others, for when such little gems were brought before the public, they would speedily become the fashion of the day.

Respecting the culture of these dwarfs, I forbear to say more, as I believe Mr. Henderson intends shortly to lay before the public a small treatise, in which will be found full particulars of his mode of cultivation.

Should any of the readers of the Journal who are interested in the culture of Vines in pots, happen to be in the Emerald Isle, and have a desire to see these interesting little objects, the place is easily reached by rail to Mullingar, thence by coach through a lovely part of the country to Ballymahon. The gardener, Mr. W. Henderson, is well known as a leading, energetic horticulturist, and any one who might be inclined to pay him a visit, would find him in courtesy and kindness all that could be desired.—J. S.

PAINTING AND COLOURING GARDEN STRUCTURES.

It is somewhat strange that although many persons have made public their views as to the way in which certain plots of ground may be rendered as attractive as possible by ornamental planting, the colouring of any timber or iron work necessary in the place has received but little consideration. In consequence, however, of want of attention to this matter, sometimes the eye is offended by the incongruities displayed, and it would be well if some definite rules could be laid down, so as to secure the attainment of the object of painting—namely, the preservation of the wood and iron—without departing from that harmony of colour which ought to prevail in all places where floral or vegetable beauty is the main attraction. There is, however, some little difficulty in preserving this harmony where the objects said to require artificial colouring, with the view of increasing their beauty and durability, are numerous; but there are many instances in which I think artificial colouring has been carried too far, and, I think, done in a manner not consistent with propriety. I will now state a few of the cases in which I have seen artificial colouring resorted to where it appeared to have spoiled rather than improved the effect, although others will, I have no doubt, be inclined to differ from me on the subject.

Commencing, therefore, with objects to which paint had been applied needlessly, I have several times noticed vases or tazzas out of doors, intended to be planted with flowers, painted of a glaring white, which was stained and spoiled by the first waterings which the plants received. These vases were of artificial stone, or some composition resembling it, and so far as durability was concerned, did not require painting. Cast-iron vases might require a coating of paint; but in all cases where such is wanted, let the finishing colour be some soft grey, or other tint resembling the stone of the district. I would avoid both white and green, which I think ought not to be used for outside work of any description. When it is desired to render iron fencing invisible, green may perhaps be admissible; but then the fence ought to be a long distance from the eye, as objects near at hand cannot be so concealed, and it is useless to attempt doing so. Returning, however, to vases, I may say that the same rule holds good with other features in the garden, as pillars, stands, walk-edgings when of stone or resembling it, sun-dial stands, and in most cases balustrading and copings. Perhaps if the latter are in contact with new work of a highly-polished character, they may be kept free from lichen and dirt, but they will rarely be improved in appearance by paint; while I must confess I admire the grey hue which

age gives such objects, if it is not accompanied with soot and other impurities, that show an artificial rather than a natural colouring. Perhaps one of the worst cases in which I remember to have seen paint applied was in colouring the coping stones of a garden wall a clear white, and to complete the absurdity, the chimney-tops were painted of the same colour.

To flights of steps, perhaps, the above advice to let well alone may not apply; still, I am uncertain whether even these are not meddled with oftener than they ought to be. Cleaning them now and then is necessary, not so much to add colouring matter of a foreign description, as to remove that dirty growth which renders them slippery when wet. This, however, is one of the cases in which utility asserts a claim to attention; but it would be well to avoid as far as possible all imitation of the system of cleaning the front-door steps of dwelling-houses in the case of flights of steps not directly connected with the residence.

Dismissing stone work and imitations of it, let us now proceed to the more difficult subject of what ought to be done with the timber and ironwork which constitute an important feature in the grounds, and which we are told must be painted. Many things must be painted, otherwise their utility is impaired and their durability shortened; but in all cases where paint can be dispensed with let this be done. Dahlia stakes and similar supports look best when they are of Ash, Chestnut, Hazel, Willow, or other straight-growing wood of the proper size, with the bark on, and no more taken off the knots than is necessary. Most other stakes, both large and small, also look better when made of similar material, rather than of dressed deal painted green or any other hue; but if deal sticks must be used, let them be painted with some colour not too conspicuous. Green, in my opinion, is the worst, and the next to that a clear white. Of course, no one would think of painting stakes bright red or yellow; but green, which is very commonly employed, is certainly objectionable. For stakes of the kind described, I would advise a dull ashy grey; and most ironwork, as arches, trellises, iron and wire fences, might be of the same tint, or what is called a medium lead colour, which is one of the most durable paints employed, certainly much more so than green. All light ironwork might be so treated, but elaborate work of a heavier character, as gates, balustrading, and pillars, might have what is called a bronze finishing. This, however, is a department on which I will not intrude further than to urge against their being white or green.

Coming now to glass structures: these require painting more than any other object I am acquainted with, as both durability and utility are alike imperilled by neglect, which is not the case with many objects painted ostensibly to increase their durability, for I believe that no painted piece of woodwork in the kingdom is so old as some that has never received anything of the kind. The woodwork of a glazed structure, however, is cut up into small pieces, which are further rendered more than usually accessible to the action of the weather, by grooves made almost as if on purpose to receive the moisture, and now and then interruptions in the way of its escape, so that there is no kind of woodwork that I know of, which suffers more from the want of paint than the framework and sash-bars of glass houses and frames. As regards the most suitable colour for this purpose, I think, on the whole, that most commonly employed for outside work—namely, a stone colour, is the best; but it should not be too light, excepting in places where there is very little smoke or dirt, for a newly-painted structure of a little duller hue than common keeps its colour longer than one which is very bright, and by adopting such a hue nothing is gained. Forcing-houses exposed to much smoke quickly become dirty, and I recollect once seeing a long range of such in the garden of a nobleman, celebrated as a patron of horticulture, which were painted of an ordinary lead colour, the best of all for durability. I would not, however, recommend this colour except in a few cases where more than ordinary exposure to dirt was apprehended.

There is more diversity generally in the colouring of glass houses constructed of iron, or a mixture of iron and wood, and it is not unusual to paint the ironwork a sort of dark dull red or brown, and the woodwork the usual stone colour. The lightness of such houses, and the different forms given them, afford scope for more variety than is met with in houses built of wood; and conservatories and other structures, whose appearance is an important object, may be painted with brighter colours than houses of less pretension. Nothing, however, is better than a good stone colour, several coats being

laid on. Effect may, perhaps, to a certain extent, be given by painting some of the glazing-bars in the fronts or sides of a chocolate colour; but this is less required than in the windows of a dwelling-house. Now and then the ribs or rafters, or a part of them, may be of a distinct colour; a good Spanish brown is, perhaps, as good as any, though not better than bronze, and all gay colours ought to be avoided. Although two colours, as a very pale blue and white, may be employed for the inside colouring with effect, outwardly plainness is best. All kinds of glazed work ought never to go longer than two years without being painted, the preservation of the putty being as important a matter as that of the timber. I am not certain, were it not for the injury the putty does, that the wood would not last longer without paint than with it; but as it is, painting is indispensable.—J. ROBSON.

PLANTS FLOWERING AT ACKLAM HALL.

MIDDLEBOROUGH-ON-TEES.

- | | |
|--|--|
| <p>Aug. 2. <i>Campanula aggregata</i>
 <i>Oxalis floribunda</i>
 <i>Verbascum blattaria</i>
 <i>Linum grandiflorum</i>
 <i>Eucharidium grandiflorum</i>
 „ 5. <i>Lilium anrantum</i>
 <i>Gnaphalium lunatum</i>
 <i>Viola cornuta</i>, Purple Queen
 <i>Lathyrus odoratus</i>
 <i>Tagetes patula</i>
 „ 8. <i>Veronica virginica</i>
 <i>Lobelia speciosa</i>
 <i>Campanula rapunculoides</i>
 <i>Brachycome iberidifolia</i>
 <i>Delphinium Ajacis germa-</i>
 <i>nium</i>
 <i>Sedum purpureum</i>
 <i>Malope grandiflora</i>
 <i>Clarkia pulchella</i>
 <i>integripetala</i>
 <i>Pyrethrum parthenium</i>,
 double
 <i>Petunia grandiflora</i>
 <i>Artemisia dracuncul</i>
 <i>Thymus vulgaris</i>
 <i>Salvia sclarea</i>
 <i>Satureja montana</i>
 <i>Melissa officinalis</i>
 <i>Galeopsis versicolor</i>
 <i>Anthemis nobilis</i>
 <i>Lilium martagon rubrum</i>
 <i>Datura stramonium</i>
 <i>Lupinus albo-coccineus</i>
 <i>Tropaeolum peregrinum</i>
 <i>Gnaphalium margarita-</i>
 <i>cium</i>
 <i>Fuchsia globosa</i>
 <i>Saponaria calabrica</i>
 <i>Linaria bipartita splendida</i>
 <i>Sanvitalia procumbens</i>
 <i>procumbens</i>, double
 <i>Rosa odorata</i>
 <i>Linaria vulgaris</i>
 <i>Lupinus hybridus atro-</i>
 <i>coccineus</i>
 <i>Nemophila insignis</i>
 <i>Althea chinensis kerm-</i>
 <i>sina</i>
 <i>Hypericum pulchrum</i>
 „ 10. <i>Gnaphalium germanicum</i>
 <i>Tanacetum officinale</i>
 <i>Silene noctiflora</i>
 <i>Centaura ryanus</i>
 „ 15. <i>Funkia carulea</i>
 <i>Zauschneria californica</i>
 <i>Meconopsis cambrica</i>
 <i>Calluna vulgaris</i>
 <i>Erica tetralix</i>
 <i>Campanula carpatia</i>
 <i>garganica</i></p> | <p>Aug. 15. <i>Centaura candidissima</i>
 <i>Mimulus cardinalis</i>
 <i>Statice limonium</i>
 <i>armeria</i>
 <i>Aster tripolium</i>
 <i>Calystegia pubescens</i>
 <i>Cheiranthus ochroleucus</i>
 <i>Geranium striatum</i>
 <i>Lysimachia nummularia</i>
 <i>Malva moschata alba</i>
 <i>zebrina</i>
 <i>Meum feniculum</i>
 <i>Calendula officinalis</i>
 „ 19. <i>Phaseolus vulgaris</i>
 <i>multiflorus</i>
 <i>Vicia alba</i>
 <i>sylvatica</i>
 <i>Anthemis arabica</i>
 <i>Pentstemon gentianoides</i>
 <i>coccineum</i>
 <i>album</i>
 <i>Sagittaria officinalis</i>
 <i>Erinus alpinus</i>
 <i>Lilium longiflorum</i>
 <i>Dianthus caryophyllus</i>
 <i>Verbena venosa</i>
 <i>Aloysia citriodora</i>
 <i>Botanum umbellatus</i>
 „ 23. <i>Nymphaea alba</i>
 <i>Nuphar lutea</i>
 <i>Jasminum officinale</i>
 <i>Saponaria officinalis</i>
 <i>Salvia fulgens</i>
 <i>patens</i>
 <i>Gazania splendens</i>
 <i>Impatiens glandulosa</i>
 <i>Nicotia glauca</i>
 <i>Gilia capitata</i>
 <i>tricolor</i>
 <i>achilleifolia</i>
 „ 27. <i>Gypsophila elegans</i>
 <i>Campanula speculum</i>
 <i>Helianthus annuus</i>
 <i>Dianthus deltoides</i>
 <i>Linum perenne</i>
 <i>Crucianella anomala</i>
 <i>Lycasteria formosa</i>
 <i>Ceanothus azureus</i>
 <i>Chrysosoma lynosyris</i>
 <i>Athanasia annua</i>
 <i>Yucca glaucescens</i>
 <i>filamentosa</i>
 „ 39. <i>Alchemilla conjuncta</i>
 <i>Alstromeria aurea</i>
 <i>Calystegia sepium</i>
 <i>Chelone barbata</i>
 <i>Sempervivum tectorum</i>
 <i>Tradescantia virginica</i>
 <i>Epimedium rubrum</i>
 <i>Lilium longiflorum</i></p> |
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—M. H.

LILIUM LONGIFLORUM—YELLOW BEDDERS.

For the information of "H. Foy," page 125, of this Journal, so far north as North Yorkshire, I have had *Lilium longiflorum* planted out without protection of any kind during the last six years. Within a few yards of where I write stands a fine cluster of this Lily in full bloom. I think from this circumstance I may affirm that it is quite hardy, and a fine border plant it is. The lanceifolium race, grown in pots for plunging in a bed with *Valloia purpurea*, constitute objects by no means despicable.

Something is said, too, at page 113, about the failure of yellow *Calceolarias* this season. Mine have grown here remarkably well. I attribute their success to deep cultivation,

so that their roots may please themselves, yet there is a fear about their going off suddenly, and I, like others, am on the look out for a substitute. *Gazania* I do not like as bedding plants. *Tagetes pumila* with me this year is remarkably good, last year it was the same. I think well of it as a yellow bedding plant, especially for ribbon-borders. I am thinking of trying some of the yellow-edged *Pelargoniums* in place of *Calceolarias*, but have not yet made up my mind.

I think I have this year an acquisition as a yellow edging or bedding plant, in the double *Sanvitalia procumbens*, a plant of compact dwarf habit. With me it is now flowering very profusely. It may be kept very compact, it is of neat dwarf habit, very double, of a bright yellowish-orange, and well worth a trial.—M. HEBBLETHWAITE, *Acklam Hall, Middleborough-on-Tees*.

PEARS ON QUINCE STOCK CRACKING.

I HAVE a pyramid *Beurré Diel* Pear on a Quince stock that has been planted ten years, and twice removed. It bears well, but the fruit cracks, and most of it is worthless. Would cutting the tree in with the view of causing it to make new bearing wood prevent the evil, or is it incurable? Would it answer to rework the tree with another kind? I mulch round it for 2 feet during the summer months, and I am anxious to retain the sort. The fruit cracks in dry as well as wet seasons. Pears on the Pear do not crack on my soil, which is rich, and 2 feet deep, on a dry subsoil.—AN OLD SUBSCRIBER, *Uppingham*.

[The subject of the stocks most suitable for Pears and other fruits for different varieties, soils, and climates deserves far more practical examination than it has received hitherto. Near Winchester, at an elevation of 200 feet, in a light loam 2 feet deep, resting on a chalk subsoil, the fruit of the *Easter Beurré* cracked when the stock was a Quince, but it did not crack when worked on the Pear stock. Having brought our correspondent's case to the notice of Mr. Pearson, he observes that at Chilwell, near Nottingham, the *Beurré Diel* cracks, though worked on the Pear stock, as do many others for which the climate there is too cold, and he thinks that the same causes the *Beurré Diel* to crack at Uppingham.

We shall be obliged by other correspondents telling us the results of their experience on this subject.]

HEATING TWO HOUSES FROM ONE BOILER.

I AM about putting a flow and return pipe from a boiler that heats a stove, into a new greenhouse (a cool house). Now, I purpose having a valve in the flow-pipe to enable me to put on the heat to the new house at such times as may be necessary, as I only require to keep out frost in the new house, while in the stove it is nearly always required. Will you inform me if two valves are necessary? Must I have one in the return-pipe, or will one valve in the flow be sufficient?—IGNORAMUS.

If the circulation in the stove-house is complete, independently of the new house, and if the pipes in both houses are on the same level, it is of little importance having a valve in the return-pipe of the cool-house; but if there is a difference in the level, it will be as well to have a valve. As the expense is not great, it might suit you best to have one, but in general cases we trouble ourselves little with returns. The water in the lower pipe will remain nearly still if there be no circulation in the upper one.]

CALCEOLARIA FAILURES.

SEEING that the subject of *Calceolaria* failures is being agitated in the Journal, I have been tempted to send a small contribution respecting it.

During the spring of 1866 my *Calceolarias* (*Aurea floribunda*), were very much diseased, so much so that I could not supply my orders from them. Well, I picked out some of the best of them for stock, planted them out, and after midsummer cut off all their flowers, and let no more flowers open.

Directly after Michaelmas I took the cuttings off—stiff, strong, and healthy, and put them in, about a dozen in a five-inch pot, in a cold frame. They struck well. I wintered them in a late vinery, potted them off in February, still keeping them in the vinery and close to the glass till established, when they were turned out of doors about the beginning of April under canvas. I think I may say *Calceolarias* have never done better; in fact,

some of my customers thought they could not be *Aurea floribunda* because they were so strong, and I have heard no complaint since.

In conclusion, I would say to your readers, In order to obtain a good stock of dwarf *Calceolarias*, plant out some good plants in a part of the kitchen garden where the flowers are not wanted, cut off all the flowers as they come, strike the cuttings in pots in a cold frame after Michaelmas, winter them where they will be free from frost and have the advantage of light and air. Pot them off in the spring, still keeping them under glass till established, then turn them out (still in the pots), where they will be cool, but free from frost, till planting-out time. The result, I think, will be abundance of bloom during summer and autumn.—Ivo.

SELECT LIST OF ROSES.

Would Mr. Radclyffe oblige me by recommending from thirty to fifty good Roses, chiefly Hybrid Perpetuals, without respect to age?—E.

[The querist does not say what sort of land he has, or whether he wishes them on Briars or Manetti. I must, therefore, take a "leap in the dark." I will, however, give a list of excellent Roses which I believe will do well on any stock. They are hardy, good, and constant bloomers, and also free bloomers. They are all here on Manetti, and a few of them on Briars.

Rose-coloured H.P.'s.—Anna Alexieff, Comte de Nanteuil, La Ville de St. Denis, *John Hepper, *W. Griffiths, Victor Verdier, Duchesse de Morny, *Gloire de Vitry, splendit on its own roots; *Charles Ronillard, first-rate, extra; *Comtesse Cecile Chabillant, extra, but not so hardy as the above.

Crimson.—*Charles Lefebvre, *Seneleur Vaisse, *Duchesse de Caylus, *Lord Macaulay, *Lady Suffield, new, first-rate; Dr. Andry, François Lacharme, Baronne Adolphe de Rothschild, *Jules Margottin, George Prince, Dr. Spitzer, Duke of Wellington, John Keynes, new, large, and fine; *Madame Victor Verdier, Madame Bontin, Madame Crapelet, Madame C. Wood, Madame Clemence Joigneaux, Madame Moreau, and Madame Julie Daran.

Dark Crimson, Maroon, Plum Purple, or Shades thereof.—Vicome Vigier; *Pierre Notting, extra; *Prince Camille de Rohan, extra; *Black Prince, new, very fine; *Duc de Cazes; Triomphe de Paris; Souvenir Dr. Jamain, new, beautiful; Duchesse de Medina Celi.

Blush.—*Caroline de Sansal; *Marguerite de St. Amand, new, extra.

White.—Madame Rivers and Madame Vidot are the best; but unless I know the quality of the land, I cannot recommend them; *Madame Freeman, and Baronne de Maynard. If simply abundance of flowers is wanted, Madame Alfred de Rongemont and Madame Gustave Bonnet, much alike, are good for the purpose. The two first named are the best for show.

Yellow Roses (beautiful, good, and excellent on their own roots, Briars, or Manetti).—Gloire de Dijon, Celine Forestier, and Triomphe de Rennes.

Bourbons (admirable).—Baron Genella, dove pink, extra, first-rate; Marguerite Bonnet, fleshy-white, fine habit and foliage; and Louise Margottin, salmon pink, distinct, well formed, and very pretty.

For a South Wall.—Souvenir de la Malmaison. It is not tender, but sometimes refuses to open unless under a south wall. It is extra fine, but best when so grown.

Qualitas vocis, or "a fine name," is a poor substitute for *qualitas rei*, or stiff petals with smooth edges and symmetrical arrangement and correct outline. I have marked thus * the very best in each colour. They are all admirable Roses.—W. F. RADCLYFFE.]

LAYERING A VINE STEM.

Will you inform me if Vines will thrive with a walk 4 feet wide between the border and the vinery? and what kind of protection, if any, will be required by that part of the stem which passes under the walk? Also say if one of Riddell's patent slow combustion boilers would answer for a lean-to vinery 40 feet by 10 feet.—H. COOKE.

[Vines always do best when the roots proceed from one point, and not from a layered stem. If you must plant your Vines 4 feet from the house, and take the stems under a 5-foot walk

before entering the house, we would prefer that the stems should be enclosed in a pipe or box below the gravel. Would it not be better to plant close to the front of the house, by having 1 or 2 feet of a border, the walk in front of the border, but the border also underneath a shallow walk? an arrangement that would do well with unforced Grapes. There is no doubt that if you bury your Vine stems below the walk they will root freely enough, but we question if that is any advantage: quite the reverse. The Riddell's patent boiler would be quite sufficient to help on the Grapes in such a house, and keep the frost out, but it would not do to force the Vines much.]

GLASS WALLS.

In answer to your correspondent, "B. L. B.," I beg to inform him, that the new system of growing fruit trees on glass walls, cylinder vineries, glass cases, &c., is now being tested by Mr. Rivers, of Sawbridgeworth, who will, no doubt, before long publish his experience. These structures in my neighbourhood are objects of interest, and well they may be, for the health, strength, and growth of the plants has far exceeded the inventor's expectation. These structures are the subject of a patent, and the hars are only made by one firm. After Mr. Rivers has sent in his report they will be advertised.—OBSERVER.

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 3RD.

FLORAL COMMITTEE.—The seedling Dahlias were the chief objects of attraction at this meeting. There were some fine varieties among them, but after all a repetition of what has been seen before. Mr. Turner received a first-class certificate for Dahlia Yellow Perfection, and a second-class certificate for Mrs. Darling. Mr. Rawlings, Romford, had a first-class certificate for Dahlia Hebe, rosy lilac, heavily tipped. Mr. G. Wheeler, Warminster, received a second-class certificate for a white Dahlia, Flag of Truce, and a second-class certificate for Chameleon, light buff tipped with red. To Mr. Keynes, Salisbury, was awarded a first-class certificate for Viceroy of Egypt, a Fancy striped flower, very distinct; and also a second-class certificate for Wonderful, another Fancy, and a first-class certificate for Sir Greville Smythe, a deep rich crimson finely formed flower. Leopardess, a Fancy, likewise received a first-class certificate, as well as Lady Derby, light ground shaded with purple. Mr. Keynes exhibited eight other seedlings. Mr. Bragg exhibited Honourable Mrs. Gerard Wellesley and Commander. Mr. Eckford sent eight seedling Dahlias; Mr. Burgess, Chelsea, two seedling Dahlias, named Mrs. Burgess and Mr. Adams; and Mr. Hopkins, Brentford, Dahlias Yellow Gem, Excellent, and Master Robert.

Mr. Eckford, Colleshill, sent six coarse-flowered Verbenas; a second-class certificate was awarded for a pale salmon rose, named Bravo. Mr. W. Paul sent an interesting plant of *Euonymus flavesens*, from Japan. The Committee considered it likely to prove a very valuable plant, and requested that it should be sent again. Mr. Willis, gardener to J. H. Ross, Esq., sent a reddish purple seedling Verbena, called Queen of the Bedders; it must be seen growing to ascertain its habit and merits.

Messrs. Veitch contributed two plants of *Aërides Huttoni*, from Java, for which a first-class certificate was awarded. Mr. Jackson au Acridas, a variety of crispum, and *Drosera diebotema*, the latter in full blossom. Mr. Cannell, Fuchsia Nursery, Woolwich, had a special certificate for a collection of cut Verbenas. Mr. J. Stevens, gardener to F. E. Williams, Esq., Malvern Hall, sent seedling Gladioli Margaret Booth, Wigley Williams, and Annie Stevens, shades of scarlet, but not of any merit. Mr. Brocklehurst, gardener to A. Turner, Esq., Leicester, contributed a single flower of *Cattleya labiata*—a first-class variety. Mr. Anderson, gardener to T. Dawson, Esq., Meadow Bank, near Glasgow, sent a beautiful collection of cut Orchids, including *Cattleya Aelandia*, *Saccolabium Blumei* Dayanum, *Oncidium leopardinum* (?), *Odontoglossum grande*, *Oncidium excavatum* (?), *Epidendrum* sp. from Trinidad.

Messrs. Holmes, Gibson, Fraser, Lidgard, Parsons, and Kinghorn, were requested to act as Judges on the 17th inst. for the collections of Tricolor Pelargoniums to be exhibited on that day.

FRUIT COMMITTEE.—There were but very few subjects brought under the notice of the Committee this day. Mr. William Paul, Waltham Cross, exhibited a collection of thirty-seven varieties of Apples grown on the Doucin or French Paradise stock, on little plants but two years old, shewing what an excellent early steek this is for working Apples upon. The varieties, of all of which there were very handsome examples, were Golden Reinette, Cornish Gilliflower, Brierley Seedling, Royal Russet, Tower of Glammis, Stamford Pippin, Sturmer Pippin, Cellini Pippin, Ribston Pippin, Old English Codlin, Large Yellow Bough, Fearn's Pippin, Edinburgh Cluster, Dredge's Fame, King of the Pippins, Norfolk Beefing, Dutch Mignonne, Drap d'Or, Lord Derby, Alfriston, &c.

From Mr. Edgerton, gardener to the Countess of Waldegrave, Strawberry Hill, came a green-fleshed Melon, which had been grown without bottom heat. It was sound, slightly rotted, but proved of but poor flavour.

Messrs. Waite, Burrell, & Co., sent a very fine specimen of the true Flat Tripoli Onion. It was 16 inches in circumference, and very solid. The same firm also sent a specimen of their new Early White Tripoli Onion, a very clear-skinned variety, which is stated to do exceedingly well when sown in the end of August.

Mr. Adam Spary, of Chailey, Lewes, sent a new Pea called Spary's Pre-eminent, which was large and handsome; also pods of a Scarlet Runner Bean, named Spary's Premier, which did not seem to be any improvement on the common Scarlet Runner. The Committee desired that they should be sent to Chiswick to be grown there next season.

Mr. Cole, gardener, Otto House, Hammersmith, sent a collection of exceedingly well-grown Peaches from an open wall.

From the garden of the Society, Chiswick, came a very ornamental collection of Tomatoes in pots, which were reported on in last week's number; likewise a collection of Figs which had been grown in pots. The varieties were White Ischia, rich and excellent; De Lipari, a small white variety resembling the White Ischia, was also very good; De La Madeleine, clear yellow, very rich and excellent; Versailles; Trois Reclotes, small, but highly flavoured; Grosse Violette de Bordeaux, conical, black skin, sweet; White Marseilles; De l'Archipel, dark tawny skin, white flesh; Bonrijansote Grise, large, brown, rich, juicy, and excellent; Grosse Verte, very large, deep green skin, red flesh, rich, sugary, and excellent—this variety was considered the richest and best, and was awarded a first-class certificate.

THE MANCHESTER HORTICULTURAL EXHIBITION.

THE last Exhibition of this season commenced on the 27th and finished on the 31st ult. The inducement held out to exhibitors in the shape of liberal prizes offered by the Manchester Botanical and Horticultural Society brought together a fine display of both flowers and fruit. The fruit and cut flowers were exhibited in a large tent near the Exhibition-house, and a portion of the ground laid out for the late National Exhibition was covered with a very large tent for the plants and vegetables. The arrangements were very well carried out. The only fault I had to complain of was that the tents were a little too dark, the material they were made of being too thick and deep in colour, causing the plants to assume rather a sombre appearance. There was a marked improvement in the cultivation and setting-up of many of the plants exhibited, showing that the late National Exhibition has infused a better taste amongst the Lancashire horticulturists, and that their horticultural talent has been aroused. The next great National Exhibition, to be held in June, 1868, will no doubt bring together one of the finest collections of plants and fruits that have ever yet been witnessed. The guarantee fund amounts to upwards of £3000, and the prizes in each class are to be increased and enlarged. Another improvement will be introduced in the shape of shortening the duration of the Exhibition. I think three or four days quite long enough, after the experience gained on the present and late occasions; and I would take this opportunity of reminding the managing Committee that it is quite necessary to give exhibitors some little remuneration for every day after the first or opening day, for it is very expensive and inconvenient for them to remain in Manchester several days. The unsuccessful exhibitors should also receive the same remuneration. The way, I think, the remuneration should be arranged should be—for each collection of plants brought from any place beyond a radius of ten miles 6s. per day, and for those from within five miles 3s. A proportionate scale of remuneration should also be arranged for fruit and cut flowers. The managers of all horticultural societies would do well to adopt these or similar suggestions, as I am sure such arrangements would offer very great inducements to exhibitors to bring their plants. They would feel sure of some little encouragement for their trouble. They would not feel like the poor fellow lately depicted in the song by "S. R. H." which lately appeared in a contemporary, nor would they exclaim—

"I'm a poor used-up exhibitor,
Knocked out of present time;"

but they would feel pleased with their slight reward, and if unsuccessful exhibitors they would go home with a fixed determination to do better next time. Horticultural exhibitions would thus become more interesting and better worth seeing, and would in consequence be visited by much larger numbers, so that in the end it would be more satisfactory to all parties.

The Dahlias and Hollyhocks were remarkably fine; in fact the Hollyhocks were the finest I have ever seen. The best nine spikes and the best eighteen single flowers were exhibited by the Rev. E. Hawke, of Willingham Rectory. The manner in which these fine exhibitions were staged, the fresh condition in which they arrived after a long journey, and, above all, the high state of cultivation, deserve the highest praise. Many of them were seedlings; I could not, therefore, note their names. The Rev. E. Hawke exhibited these in such a perfect state, that I should think it must create a greater taste amongst gardeners for taking these fine flowers again in hand. It is a pity they are not grown more than they are; few plants are more

showy, none more easily managed. A splendid miscellaneous collection of plants was shown by Mr. B. S. Williams. These filled one-fourth of the tent; and as they were brought (three large vanloads), merely to decorate the tent, it shows what an enterprising nurseryman Mr. Williams is. Mr. J. Watson, of St. Albans, also exhibited a large number of tree Ferns, and amongst them the largest *Todea peltidea* I have ever seen. It was a fine plant. Mr. Watson also exhibited his *Tricolor Pelargonium* Miss Watson and Mrs. Dix. I need not here describe them, as almost every one has seen them, and no doubt heard Mr. Watson frequently expatiating on their good qualities. Splendid examples of *Lilium auratum* were shown by Messrs. Yates. The Grapes exhibited were good, as also the Barrington Peaches from Mr. Tillery, of Welbeck. The vegetables were also numerous and good. The weather altogether was delightful, and the Exhibition in every respect was a perfect success.

I may remind intending subscribers to the Findlay testimonial that the list is still open, and that the handsome sum of £220 has already been subscribed.—J. WILLS.

THE CORNISH MYSTIC BARS.

IN your number of 22nd ult., the article headed "About the Land's End" speaks of "mystic bars," used in that neighbourhood in place of gates or stiles. You will, probably confer a favour on others, as well as on myself, if you can give a little further specification as to how they are to be laid down. How wide are the "bars of granite" to be? Is the ground to be flush—that is, level with the upper surface of the bars? No doubt any other stone would do as well as granite, which here is not easy to be had, and I should think would be anywhere rather expensive to work into bars.

I have heard of iron or wooden bars forming a bridge over a ditch, and close enough together for human beings to walk over, deterring quadrupeds from attempting to pass. I think this was said to be in Norway or Sweden, and I supposed the bars to be across the ditch or hole—that is, in the line of the path. The Cornish "mystic bars" would appear to lie across the path. I have seen what were called "Cornish stiles" in the neighbourhood of Bath, really a passage so narrow that to pass one leg had to follow the other through the slit. These are good in their way, but not very accommodating to crinoline.—ANGLO-SCOTUS.

[The "mystic bars" are placed across the path, usually level with its surface. Any kind of stone would do as well as granite. Each "bar" in Cornwall is really a rough piece of granite about 9 inches square, and some 6 feet long. They are placed about a foot apart. A hole or ditch is beneath the bars, which can be seen into through the openings, and this may aid in convincing the irrationals that it is a trap.]

"STOCKS IN SPIKES."

A QUESTION as to the above flowers has arisen from the mode in which they were exhibited at a late show. Some persons sent Stocks with the centre and side flowers on; others with the centre only. Which of the two modes of exhibiting is correct?—C. N. B.

[We presume, as you put the words as a quotation, the prize was offered for the flowers of "Stocks in spikes." If so, we consider that compound spikes—namely, those with side spikes as well as the central spike, were as much entitled to be exhibited as the simple spikes—that is, those which had only a central spike. There is no distinction made between them in the words you quote.—ENS.]

VEITCH'S PERFECTION PEA.

IN Mr. Fish's "Doings," published in your Journal of August 15th, he mentions having tried many ways of growing that queen of Peas, Veitch's Perfection—but that he has not succeeded in filling the basket from it as he wishes. I will therefore state my method of growing not only this but many other varieties of Peas, and by pursuing this method I have seldom failed to have most abundant crops of fine well-filled pods. I could to-day (August 26th), gather four bushels of well-filled pods of Veitch's Perfection Peas.

The following is my method of cultivation. I generally place my rows of Peas from 16 to 20 feet apart, growing dwarf crops between them. I mark out trenches 2½ feet wide, and take out the earth a good spade deep as for Celery. I next place from 6 to 8 inches of stable-manure in the trench and dig

it over. I then fill into the trench manure, old soil from the potting-bench, and the soil taken out of the trench, so as to come within 2 inches of the top. I next rake the soil even, and sow in each trench six rows of Peas, about 4 inches apart and three-quarters of an inch from each other in the row. They are then covered with 2 inches of soil. As soon as the young plants appear above ground I dress several times with soot and fine earth in equal parts, to keep away slugs and other vermin, and when 2 inches high place small branches, about 12 inches high, taken from the Pea-sticks, amongst the Peas. As soon as they clasp these they are stuck in the usual way.

After trying nearly all the new Peas, I consider Veitch's Perfection to be as good as, if not better than, any Pea in cultivation. I measured some of my rows to-day, and I find they are nearly 4 feet through, and literally covered with fine well-filled pods. The soil is a rather stiff loam with a clay subsoil.

—HENRY ELLIS, *The Gardens, Alfreton Park.*

CLUB-ROOT IN THE CABBAGE TRIBE.

CAN you enlighten me as to the cause of clubbing in the root of the Cabbage tribe?

I have some plants of Sprouting Broccoli raised from seed in a bed never used for the same purpose before, and dibbled out when very small at short distances to strengthen. On pulling them now to plant out, I find some rows all clubbed, and other rows without one clubbed plant in them.—J. H. T.

[The club-root, or ambury, being caused by an insect, the ravager may pass along one row of plants, and leave the neighbouring rows untouched. The insect is a very small weevil, *Cureulio contractus*. It is only a line in length, of an uniform black colour, and its thorax very contracted in front. Frequent transplanting, dipping the roots at each removal into a creamy mixture of soot and water, is the best mode of keeping the insect at bay. The female punctures a root or the base of the stem of the plant and deposits an egg in the puncture. The grub eats the inner bark of the plant, causing the swelling, or clubbing, and this enlarges, the wound putrefies, and the plant is ultimately killed.]

THE INFLUENCE OF PAST AND PRESENT UPON FUTURE STATES OF THE WEATHER.

It has been said with truth that "a symbol is an instrument for the discovery of facts." If this be the case, then, in meteorology, where facts are as numerous and as complicated as in chemistry, symbols must be more useful than mere enumeration, or even than the usual form of curvilinear diagram, for they present to the eye with ease what figures would convey but slowly to the mind. A symbolic method, then, it is evident is the readiest form of investigating atmospheric phenomena, even in the difficult phases constantly presented by local causes.

To the agriculturist and to the horticulturist any simplification of prevalent methods must be a gain; and as a means of ready reference, and also of immediate and complete identification of "possible influences of past and present upon future states of the weather," no method seems to me so perfect as that inaugurated by Dr. S. Elliot Hoskins, in a paper which has been published by the Royal Society, of which Society he is a Fellow. Dr. Hoskins has been long known in the Channel Islands as a laborious and scientific collector of meteorological phenomena; indeed it may with truth be said that to him we are indebted for by far the greater portion of what is now known of the peculiar climates enjoyed by the sister islands. The Channel group, though alike enclosed in a large bay whose form attracts the mighty tidal wave of the Atlantic, while lying close to the great European mainland, have also their distinctive and peculiar climates; and Guernsey, in which island fortunately for science Dr. Hoskins resides, from being the outlying island, and from its peculiar size and land elevation, is by far the most interesting as typical of climate.

In England the atmospheric phenomena developed in these islands are either generally confounded together or not understood at all. From time to time in this Journal I have endeavoured to draw attention to these facts, and to show how much certain local conditions, and chiefly among them the comparative equability of the night temperature, and the violence and direction of the prevailing local winds, account for many circumstances of general interest to students of horticulture. I have thus arrived at the same conclusions as Dr.

II kins respecting the peculiar influence of our local climate on vegetation; and though "by another road," our opinions, as he says, "point to the same direction."

The object of the pamphlet published by Dr. Hoskins, and the perusal of which has led to these observations, is stated by him to be "an attempt to determine whether any month or class of months stand to each other in the relation of cause and effect; in other words, whether the atmospheric conditions of autumn exercise any appreciable influence upon the fruitful or unfruitful character of the ensuing season."

To show this in the simplest and briefest way, tables were accordingly prepared from meteorological records at Greenwich and in Guernsey, in which tables the excess and defect of temperature, of rain, and of wind, on an average of twenty years, were carefully calculated. The resulting numerals, converted into simple and familiar signs, were then delineated in squares upon a sheet of sectional paper, accurately engraved according to scale. A square space was assigned to each of the months, and they were laid down as *abscissa*, with the years as *ordinates*. In this way diagrams were constructed which present, at one view, the state of the weather during each month from 1843 to 1862, divided into two periods of ten years each, or decades.

These diagrams (preserved for reference in the archives of the Royal Society), form not only registers, but facilitate comparison. They were afterwards decomposed, and the combined signs in the squares transformed into letters of the alphabet, so as to represent these four states of the weather—viz., heat, cold, dryness, and moisture, and their combinations, as follows—A = warm + dry; B = warm + wet; C = cold + dry; and D = cold + wet. The letters were then arranged in columns under the heads of months and years; the number of times in which each recurred was noted, and resulting numerals, which are the coefficients of the sums of the letters, were collected in lines and columns—those of the months at the foot, and those of the years at the sides, of the tables of analysis. Many unexpected combinations resulted, remarkable also because the data employed had been gathered in their natural course, and not prepared to meet any preconceived notion. The horticulturist, therefore, may gather from these analytical tables that the period from 1843 to 1852 was much warmer than that extending from 1853 to 1862—that is, that the first decade was warmer than the second, the warm months of the first being equal in number to the cold months of the second.

On comparing also the two groups of Novembers it will be seen that their ratios were also in contrast; the warm Novembers of the first decade (1843 to 1852) being to the cold as 8 to 2, and those of the second decade (1853 to 1862) as 2 to 8. Furthermore, from 1851 to 1861 eight of the Novembers were defective in temperature, and they were followed by Mays and Junes of a similar character. These facts seem to justify the surmise that the state of the weather in autumn did exercise some influence upon the succeeding springs, during the period under consideration, both as regards Greenwich and Guernsey. This similarity of disposition is all the more striking when the difference in position and latitude between the inland and the insular station is taken into account.

The symbolic mode adopted by Dr. Hoskins seems to me to be admirably adapted to guide and simplify the labours of the horticulturist. It has, besides, the advantage of being adapted to the investigation and recording of atmospheric phenomena peculiar to localities; and its adoption on an extended scale might enable scientific observations to be carried out which would help to solve many an obscure problem in our daily work. The spirit of inquiry now so greatly developed requires some such guide and ready means of reference, and, from a conviction of its usefulness, I have wished to bring it before the notice of the readers of this Journal.—T. C. BRENAUT.

AIR-ROOTS ON VINES—GRAPES RUSTING.

MANY and different are the opinions of gardeners as to the cause of air-roots on Vines, some contending that they result from bad management, others that they arise from too-deep planting. I have come to the conclusion, when air-roots do not appear till after the young shoots have been stopped, that the sap, being suddenly prevented from flowing in its usual channels beyond a certain point, is expended in the production of these roots. They have no bad effect upon the Vines, for the fruit soon demands all the sap which will flow to them, and the air-roots shrivel and dry up.

Another obvious cause of air-roots is keeping too much moisture in the house, and not affording sufficient ventilation. This must be obvious to every careful cultivator who has managed small vineries or pits. It is quite possible in such structures to produce excellent Grapes, although some gardeners suppose that such a result cannot be achieved without glass doors and fronts to their structures for growing Vines.

In many vineries, however, even though of a more pretending description, we find small, shabby, rusty, shrivelled Grapes, which have much more the appearance of bad management than a few air-roots. Rusting is produced by allowing the flues or hot-water pipes to become over-heated, or by putting water on them whilst in this condition. The same is the case with sulphur, which will also rust Grapes when very tender.—JAMES REID.

VISITS TO GARDENS PUBLIC AND PRIVATE.

MR. RICHARD SMITH'S NURSERIES, WORCESTER.

(Continued from page 102.)

HOWEVER interesting the in-door department of this famous nursery may be—and I think enough has been said to show that it is interesting, that whatever is attempted is done well, and that order, neatness, and regularity reign supreme—yet it is the out-door department which really forms the chief feature, and to it an equal amount of attention is paid, so that it is no small treat to traverse these hundred acres of well-kept and well-stocked ground. This is the amount of land that Mr. Smith has under cultivation in fruit and forest trees. It is not with him as I heard concerning a celebrated foreign nursery of large extent—we will say in Timbuctoo—where visitors are taken through plantation after plantation, and wonder wherever there is to be an end—can it be like Alexander, that only a world-wide domain would suffice? If you should happen to leave Timbuctoo the next day you will leave with wonderful ideas of the extent of Mons. François's business; but if, charmed by the genius of the place, you should wish for a while longer to linger there and visit other nurserymen, you will feel surprised to find that you are loitering through part of the same grounds you traversed yesterday, which are shown to you by three or four persons as their "terrain." Then comes the bewildering question, Which is correct? Was the great man humbugging me? or are these merely vassals of his, who owe him a petty suzerainty while they claim the lands as their own? Nor, again, are Mr. Smith's grounds like some I have seen in my own land, where quarter after quarter is crowded with trees of all kinds, running into one another, seldom moved, ill-shapen, and unsatisfactory. One expression of Mr. Smith's shows what his stock is, "I endeavour to make every tree grown in the nursery a specimen plant of its kind." This involves trouble and expense, but I need not say it ensures to purchasers an article of the greatest excellence, as I believe all who have grown Mr. Smith's plants can bear witness to.

Some idea of the amount of business done may be gathered from a few facts which I here record. There are 50,000 fruit trees trained every year, and eighty men are engaged from the beginning of October to the end of December in taking up and packing trees of various kinds. There are twenty-one miles of walks; 400,000 stakes are used yearly; there are fifty acres of fruit trees, and whole quarters of Roses and forest trees of every kind and description.

I had a walk through the Rose grounds of course, and it may be interesting to the many growers of Roses to see what the judgment was, remembering these were mostly on the Manetti, that the soil is somewhat light, and the time of year the middle of July. Joséphine Beauharnais, a beautiful and distinct silvery rose-coloured flower. Comte Alphonse de Serenye, a good cherry red flower, not so much grown as I think it ought to be. Fisher Holmes, I have already pronounced of this that, although very pretty, is it inclined to be thin; and these nearly full Roses are very disappointing. Madame Eugène Appert, rough, and not worth growing. Mademoiselle Bertho Lereque, like Thérèse Appert, rough. Abbé Berleze, a flat flower in the style of *Géant des Batailles*, and an improvement on it, not so liable to mildew. Achille Goned, too coarse for my taste, but a favourite with those who do not mind a flanning dame. Auguste Rivière, a good bright Rose, and to be sought after, I think, more than it is. Baronne Maynard, one of the best of those hybrid whites represented by Madame Gustave Bonnet, &c. Belle Normande, a poor-coloured flower. Duc de Wellington, beautiful in bud, and occasionally very fine

when fully expanded, but too apt to show the eye. Duchesse de Caylus, a first-rate Rose, and well sustaining the character of my good and honest friend Charles Verdier. Leopold Mansburg, bright carmine, a well-built flower of good properties. Madame Canrobert, a fine flower, but shy in its habit of growth, and not free-flowering. Monsieur de Pontbriand, rough, very curious colour. Marguerite de St. Amand, a first-rate Rose, and although at times apt to curl its outside petals, yet one of the very best acquaintances we have lately had. Monsieur Bencegne, a bright lively colour, but not very full. Olivier Delhomme, a fine old flower, but eclipsed by some newer kinds, especially in the matter of constitution.

There is a large centre drive running from one end of the nurseries to the other, and on either side of this you pass by whole quarters of fine Conifers, including *Wellingtonia gigantea*, *Picea Nordmanniana*, *Picea pinsapo*, *Thuopsis dolabrata*; and unlike many a nursery where browned tips and blackened stems too truly tell the tale of last winter's frost, Mr. Smith has been fortunate enough to escape; consequently everything looked in the best possible condition, and as a heavy rain had fallen in the morning, all was especially fresh. I was surprised to find *Rhododendrons* doing so well, as the soil was not that which I had been led to believe was necessary for these plants; but Mr. Smith told me that by adding a couple of inches of manure he found that they succeeded quite as well in his ground as elsewhere.

At the end of the central drive there is a lodge just on the Malvern road, and on the other side are large plantations of forest trees and of those with ornamental foliage. Thus, the *Acer negundo variegata* is cultivated in large quantities, and no greater addition has been made to our ornamental trees than this beautiful Maple. Mr. Smith informed me that a very beautiful group is formed with this tree, the Purple Beech, and the Silver Poplar. Among the curious trees which I noticed were the Ring-leaved Willow, every leaf of which forms a perfect ring; the variegated Dogwood, which is one of the most effective variegated trees which we have. It has been found that by grafting the Persian Lilac on the Privet it is induced to flower much more freely. Portugal Laurels trained as standards were abundant, and form an excellent substitute for standard Orange trees; but, in fact, both time and space would fail me in attempting to give a correct idea of this admirably managed establishment. I must not, however, omit noticing some fine specimens of trees on the lawn round the house, although Mr. Smith lives at some considerable distance from the nursery. *Quercus Fordii*, Weeping Ash, *Picea Nordmanniana*, *Araucaria imbricata*, the Drooping Cedar, and many other kinds are here seen to great advantage.

The whole establishment is, as I have said, under admirable management. Every one in it seems to take a pride in it, and to be interested in its success; and the excellence that pervaded every department showed that the able and intelligent foreman under whose superintendence it is has devoted himself to it *con amore*. What a mistake it is for people not to interest themselves about those who serve them! for sympathy is like mercy, it "blesses him that gives and him that takes." And how much more of life and vigour would there be in many an establishment if, instead of grinding down and domineering over the men, kindness and good feeling prevailed. I have again to thank Mr. Smith for his very courteous treatment of me, and to express the gratification that this visit afforded me.—D., Deal.

FLOWER GARDEN PLAN.

THE group of flower-beds in the centre I intend edging with Box and surrounding with gravel, as I do not like flower-beds set out of the lawn itself; it will also give me an opportunity of making the lawn from seed. The four beds at the corners of the lawn I intend for choice evergreens and Roses. What I more particularly wish to know is whether the central group of beds is as effective as it could be made, for I desire to have a little gem of a garden.—J. F. C.

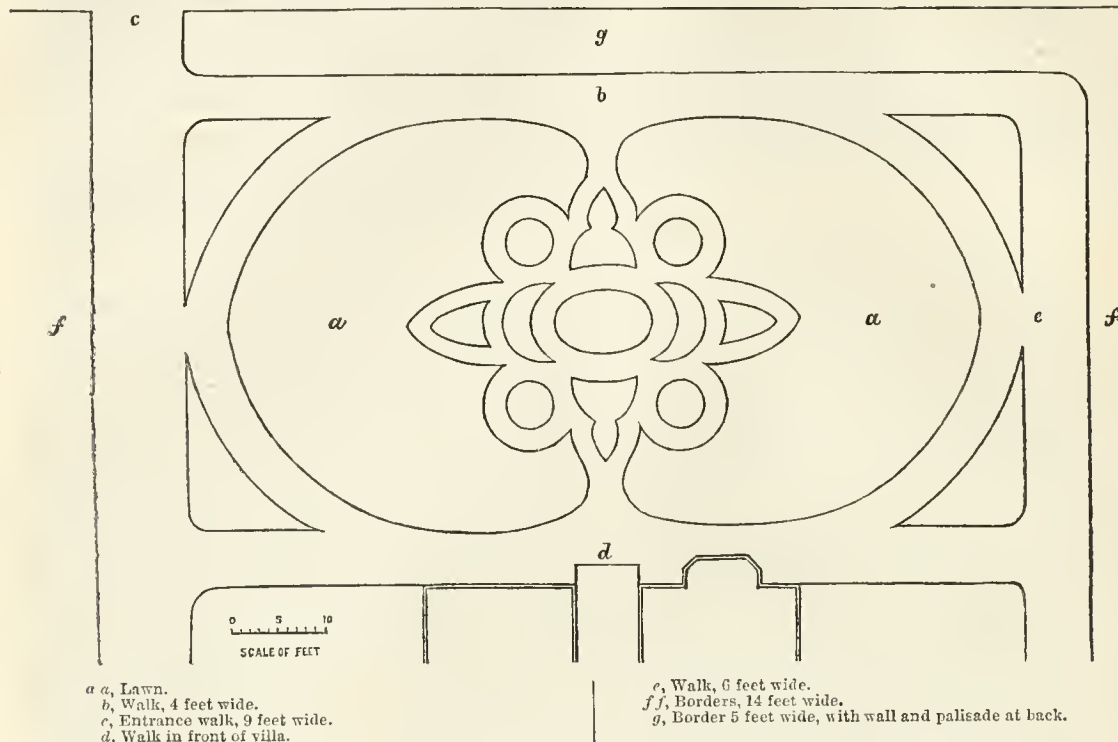
[You might consult a hundred sheets of designs, but which we cannot send you, and not be able to fix on one more simple and effective than that which you have chosen; and as it is your own plan we would advise you to adhere to it in the main features, and make such alterations as you may deem proper when you have read our remarks.]

The clumps are well proportioned, except the central oval, 10 feet in its greater diameter by 7 feet in its less one, which is too large for the others, and if planted of one colour would

be apt to overpower them by its massiveness. This would be prevented by planting in bands or rings.

The plan could only be carried out on gravel; and to look well your plants must be low, or the divisions of the beds will not be seen from a distance. We would recommend that your

pathways of gravel should be from 1 to 1½ foot wider; they now seem little over 2 feet—we would have them from 3 to 4 feet. You can easily do this by reducing the length of the oval 2 feet and the width 1½ foot, and extending a little further on the lawn.



Wide walks are no attraction unless you have people to keep them gay; but the walk (b), at the farther side of the lawn should be 6 feet instead of 4 feet wide. Your entrance walk c, is 9 feet wide, that in front of the villa (d), is 7 feet in width; and unless there are strong reasons to the contrary, we would make the opposite walk alluded to, and the end one, also 7 feet. This you may do without lessening your lawn. A walk often does great mischief in destroying unity of expression and breadth of view; and you can only be reconciled to the break thus made by a self-evident utility, usefulness of itself giving a reason almost sufficient to satisfy even refined taste.

Granting the full propriety of having the four large triangular beds at the corners of the lawn for evergreens and Roses, we cannot perceive the advantage of separating these at each end from the lawn by a circular gravel walk, and thus having so much gravel at the ends. Why not bring the lawn up to such beds and thus enlarge its size? If you must have Box for these beds next gravel, well and good, or even Box next the lawn if you like, but with a strip of gravel 9 or 12 inches wide instead of a walk. Were it ours we would confine the Box to the central group, and place turf verges round these large clumps, and round the borders, too, outside. However, these are mere hints.]

WORK FOR THE WEEK.

KITCHEN GARDEN.

Celery, if any strong plants remain, they may be taken up with balls and "heeled" deep for use in soups; this will save the prime stock for salads. *Cabbage*, trench and manure well for the winter sorts in due time, and plant out some more strong plants of the early kinds for late Coleworts. *Endive*, plant out more for the last batch, using high slopes, which may receive covers, or hoops and mats, when severe weather arrives. *Mushrooms*, the best way to secure good and lasting crops throughout the autumn and up to Christmas is to make the beds early enough to give them plenty of time to work slowly, depending more on the warmth of the atmosphere than upon fermentation in the manure. The natural warmth of the last fortnight in August and the first three weeks in September will guarantee the safe working of the spawn, provided a proper medium be procured. Three things are requisite in the dung to insure the spawn working well—viz., what is technically called "sweetness," an open texture, and a medium degree of moisture. It is a good plan to make the beds in the the Mushroom-house at twice, that is to say, if the shelf is 1 foot in depth, which is not too much for substantial beds, 8 inches might be made any time in July, and the remaining 4 inches as wanted. In this case use new droppings from the stable door, with plenty of fresh litter amongst them, and add

one-third of strong loam at least, beating the whole into a solid mass. For the surface of such beds well-fermented dung alone should be used. It should be borne in mind that depth in the bed, and loam mixed with the dung, tend at all times to render the bed more durable. Remember that *Mushrooms* are as fond of abundance of air, and even light, as other plants. They grow most in the fields at night, not because they hate light, but because they can enjoy abundance of atmospheric moisture, which is so quickly dispersed by the return of day. Let, then, abundance of atmospheric moisture be secured at all times, as also a nearly uniform temperature of 55° or 60°, and no fear need be entertained of injury from light or air either day or night. *Lettuce*, plant out some strong Bath Cos for the latest autumn use on rich soil and in a sheltered position. *Winter Spinach* to be thinned to about 6 inches apart, and the hoe worked through it. *Scarlet Runners*, let all the old pods be picked clean, except a few for seed; they exhaust the crop much, and prevent succession. *Turnips*, thin in due time, and run the hoe through them.

FRUIT GARDEN.

Particular attention now requires to be directed to the gathering of the earliest varieties of Apples and Pears. As a general rule, the latter may be considered fit when the stalk parts from the spur by merely raising the fruit to a horizontal position

without pulling. The Flemish Beauty is, however, an exception, and must be gathered whilst it still retains considerable hold, otherwise it becomes dry and musky instead of being melting and sweet. The particular tinge of colour which Peaches and Nectarine acquire when ripe should be observed, in order that they may not be touched till they readily part from the tree. Funnel-shaped gatherers, lined with velvet, have been recommended, but the hand is preferable if applied so as to grasp the fruit with gentle and equal pressure on five points of contact. In some cases the flavour of these fruits will be improved if they are not used till the day after they are gathered; but they must be laid softly on cloth or on cotton covered with tissue paper.

FLOWER GARDEN.

As the numerous varieties of Verbenas are now in bloom, the best kinds should be selected for holding-out next year; also the particular habit and colour should be noticed for the better arrangement of them at planting-out in the ensuing season. The same observation holds good in regard to the new Petunias, Fuchsias, Pelargoniums, &c. Where there are conveniences for storing them in winter, as many kinds should be grown as possible for planting on rockwork, in borders, and to produce variety; but in clumps nothing but first-rate kinds should be planted. It will be well to fill up many blanks in flower-borders, as soon as possible, with plants of a biennial character, such as Wallflowers, Sweet Williams, Campanulas, (*Campanula grandis* is useful), Hollyhocks, biennial Stocks, and the various Primulas. Most of these will be found very useful next spring, although somewhat old-fashioned. Auriculas must be sheltered from bright sunshine, as well as from excessive rain, keeping the pots free from weeds, and occasionally stirring the surface of the soil with a blunt stick. It is now a good time to procure plants from a distance, that they may be established before winter. Layers of Carnations and Picotees, where sufficiently rooted, may now be taken off the stools and potted in pint pots. The soil should be of a sandy texture, without any manure being mixed with it, in order to prevent the plants assuming too gross a habit, which is prejudicial to their health during winter. Pinks should be planted in their blooming-beds without delay. Pansies may now be divided and planted out. Cuttings of the weakest shoots strike root easily, and make better plants than those of more robust habit. Dahlias should have all malformed flowers removed as soon as perceived, and where necessary, some of the branches may be thinned out. Trap earwigs in every possible way, and keep the ground clean round the plants.

GREENHOUSE AND CONSERVATORY.

Climbers will always require attention to keep the shoots in their proper places. Take care, in training, that the part of the trellis or stakes nearest the bottom does not become bare of flowering shoots, as the beauty of climbers depends upon their being clothed with foliage and flowers from the rim of the pot upwards. Pot off seedling Calceolarias into small pots, and keep them close in a frame for a few days. *Lilium laucifolium* will now be in its beauty; supply it bountifully with water, and shade the flowers from powerful sunshine to prolong their gaiety. Pay attention now to Chrysanthemums; they must not be stopped later than this to have fine heads of bloom; a little liquid manure will assist them; let it be applied twice a-week if your desire is fine plants with large flowers.

STOVE.

As the nights become cold a little fire heat must be given, not with the intention to promote growth, but to assist in ripening the succulent wood which has been made during the late dark summer. As all liberally-potted specimens have made unusual progress, it now becomes a serious matter with the cultivator how to harden their growth sufficiently in order to make it stand the winter. Admit all sunlight, and give air abundantly when the temperature exceeds 80°. The *Eranthemum pulchellum* with the *Justicias*, *Poinsettias*, *Euphorbias*, *Plumbagos*, *Cesueira zebrina*, and *Achimenes picta* must now receive every attention in order to induce them to blossom through November, and even December. Encourage the late growths of Orchids by all possible means—viz., by topping-up, heat, atmospheric moisture, and a circulation of fresh and sweet air day and night if possible. Continue to cool down those inclined to rest, and, with a more moderate temperature, let them have plenty of sunlight on the leaves and abundance of air.

PITS AND FRAMES.

Continue to pot off cuttings as rooted; place them in a close

pit or frame for a few days in order that they may become established in the pots, when they should be removed to a sheltered situation to harden. Keep every pit and frame well filled, as no time should be lost in securing a sufficient stock for next year.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

The general routine has been much the same as in previous weeks' notices, planting all vacant ground, and but for want of opportunity we might have earthed-up some of the stronger earlier Greens, according to Mr. Keane's advice, but now they are beyond our reach, and it is impossible to go among them without breaking them. The chief use of such earthing-up is to secure the stems from storms and gales of wind. Otherwise the taller the stems of such vegetables as Sprouting Broccoli, Scotch Kale, and Brussels Sprouts, the more the produce obtained after the head of the plant is cut off.

Cucumbers.—Pulled out of our pit our first-planted Cucumbers, as they were the worse for the heavy crops they had borne in little room. Plants will not last so long in flat, narrow pits, as they will do in small Cucumber-houses, with more sloping roofs, and, therefore, more room and more light. We have planted again with strong healthy plants, which, if we like, will give us a good supply up to about Christmas; but in all such narrow pits, taking a good crop in autumn and early in winter prevents much fruiting afterwards. Plants intended to fruit after Christmas should be planted forthwith, be kept healthy, but allowed to fruit little until after Christmas. In roomy span-roofed houses, where an abundance of light and plenty of heat can be given, and the heating medium is a good distance from the plants, such extra care in taking little fruit until the shortest day is past, when spring supply is chiefly aimed at, is not of quite so much importance as it is in the common, flat, and narrow pits, which used to be devoted to this purpose. One reason why we used to succeed so well in dung-frames with early Cucumbers, was the ease with which we could elevate our frames behind, so as to give a steep roof instead of a flat one, and thus we obtained more light than in a flat pit. Where a bed was well made, and there was plenty of material to pack up with, and clean protecting material for the glass, plants did well in these old frames, and though there was more labour, the gardener afterwards was tolerably independent of everybody as respects manure for his Cauliflower and Celery. At the present time, even with a fair allowance of fermenting material, we have not yet planted out all the Celery we intend, because until now we could not obtain rotten dung to help it, and knew right well it was little use planting without that assistant to quick and crispy growth.

As to Cucumbers, however, we are sorry to learn from numerous quarters, that the disease has been very bad this season. We are very desirous to know what brings it on, or what would take it away. We passed the greater part of our gardening life without ever seeing a trace of spot, or curl of leaf, or suppurating fruit, and then for a few years we had less or more experience of all these, and we found to our sorrow that change of seed, change of soil, change of temperature, &c., had no influence whatever on the disease. Our only remedy on which we could depend, was fresh poor soil, and very frequent sowing. We had little of the enemy last year, and this season we have, as yet, seen nothing of it, but we confess we are totally ignorant as to the cause of exemption.

It is very easy to assign reasons for this disease before you actually feel its influences. Lately, in a conclave of gardeners, the subject was mooted, and one person stoutly contended that it was all owing to using too rich a soil. Well, we used all kinds of soil; turfy loam alone, garden soil alone, peat alone, sandy loam alone, and all conceivable mixtures, and yet the dread disease would appear. Another stated that it was owing to high temperature at the roots, or too high temperature in the atmosphere of the place. Well, we had the plants in all kinds of places, in all kinds of soils, in-doors, out of doors, on ridges with dung beneath, in the open garden with nothing beneath them, and all, in every place, were sooner or later attacked with the malady, and yet all the time neither Melons nor Vegetable Marrows suffered. Another gentleman stoutly contended that the disease was carried constitutionally in the seed, and folks should beware as to whence or how they saved or obtained their seed. We once thought there might be something in this, and procured our seed from great distances;

but that did nothing to rid us of the enemy. By the time the plants had borne some good fruit they began to show signs that they must ere long be succeeded by others, and we saw no other method of keeping up a supply. As if to disprove the seed theory, though in itself well worth attending to, we happened to have our seed that furnished the plants this season, that have borne well up to the present time in frame and pit, and showed no signs of disease, from a gentleman whose house we have sometime ago chronicled as a picture and example of Cucumber-growing, and where, up to this season, there had been no trace of disease. We say we had the seed from the same packet as that gentleman saved himself from healthy fruit, and yet for the first time, his plants sown in succession as he would, he could not escape the disease, could not obtain Cucumbers, and the other day had not a single producing plant in the place; and though able and willing enough previously to estimate in our case and in others the cause of the disease, he confessed that now he was completely nonplussed. He was merely having his empty houses thoroughly cleaned, and was hoping his young plants intended for the winter would be more prosperous. As our seeds and his own were saved by himself and taken out of the same heap, there could not by any possibility be a great deal in the seed as a cause. What, then, can be the reason or cause of the visitation? We are left in even greater darkness than in the case of the dread Potato disease. Without egotistically saying anything of ourselves, no one for many years, to our knowledge, has cultivated Cucumbers more successfully than our friend from whom we had the seed that yielded us such healthy, prolific plants, and yet this season with, as far as he knows, the same treatment, the same soil, the same attention to watering, ventilation, and temperature, he has had his plants diseased in every place about the premises, in-doors and out of doors. What is also very perplexing is, that the disease will manifest itself in one place and keep away from another place at a short distance, and then in another year it will appear at the last place and disappear from the former, and in either case the managers will be as unable, as we confess ourselves to be, to assign a sufficient reason for the result.

Will chemical and other learned correspondents endeavour to help us in this matter? When driven into a corner with nothing to lean on but fresh poor soil, and frequent planting, we tried small portions of ingredients in the soil and in the atmosphere of the place, but without the smallest benefit. In one case we did think we derived a little benefit from using a dusting of sulphur in the soil, but in that case, on removing the plants we found the roots attacked with fungus, which had spread from some half-rotten tree leaves placed in the bottom, just beneath the soil.

One moral we should like to draw in the meantime, both for employers and employed. To the latter we would say, Until the evil leaves you, plant often. To the former we would say, Be not too hard on your servant, if he cannot give you the usual complement of nice fresh Cucumbers, owing to the disease manifesting itself—and this, we hear, has been done in not a few instances—for the gardener himself will suffer enough from the disappointment; and we urge this all the more, because, however learnedly those may talk who have never grappled with the disease, our candid opinion is that as yet neither the philosopher nor the plodding working man has discovered, or at least made the discovery known, as to what are the causes or the remedies of the evil.

Celery.—Since planting we have hardly had a water-pail in our flower garden. Our Celery has looked after itself too, thanks to the frequent refreshing showers. We could not help thinking where we would have been if we had been under the necessity of watering freely, as we are anything but too forward as it is. There is something very interesting in the law of compensation. If we had been obliged to water more we should have had less trouble with weeds, less time taken up with keeping the lawns short and carpet-like. Went over part of our Celery, cleaning it, removing a stray sucker, tying it up, and earthing-up a portion. For the present we will earth-up no more than is wanted three weeks or a month hence, and just doing a little at a time. For reasons previously given we never earth-up our main crops until the remaining un-earthed would render the crops liable to be injured by frost. Tying up the plant loosely is very different. The earthing-up bit by bit, as most calendars recommend, is the fruitful cause of disappointment.

ORNAMENTAL DEPARTMENT.

Have been very busy with cutting-making, but would have

done much more but for the necessity of making all presentable. We have had a severe task with the entrance front gravel. At first we made it a square in unison with the mansion. To meet the requirements of several coachmen the square was so far departed from at different times, by rounding the sides, as to make a little alteration in the levels. For more than twenty years nothing had been done to it, but adding a little small gravelly sand to the surface, to freshen it up. In drizzling weather this became soft, and mortar-like. We cleared away this soft surface, which answered for helping to cover slightly, and bind a rough road, picked over the surface left, going deeper where there were inequalities, and sifting all that over, so as to dispose of the earthy and mere sandy particles, and sinking the gravel some 6 inches deeper at the farther end, so as to make a more rapid and regular descent from the door of the mansion to the farther extremity. With other work demanding attention, it was necessary that this affair should not last long, in other words, that there should be no doing and undoing, no lifting a spadeful, putting it down, and taking it up again. Hardly any fresh material was to be had, so with a fine sieve getting rid of the fine material, we were to make the most of the old, and yet secure dryness in all weathers, and with merely a good drain at the lowest point, the turf being levelled down to it there. Now, in all such work the gentleman and the gardener should be well aware that every yard of soil taken away will be a fair cartload, a matter easily forgotten in ground work, and fertile at times of much unpleasantness, when the work is of much extent. Secondly, in answer to some inquiries that have been lying past, we would say as the result of considerable experience, that in all such work performed by fair-labouring workmen, the best plan is to settle first on the level at different parts, have strings or lines to connect these transversely and longitudinally, and then it will at once be apparent what is to be reduced, and what is to be elevated, and no spadeful will want moving twice. In a width of some 85 feet we shall have a fall of about 21 inches, and with a firm surface, we see no reason why the gravel should not be always for a long time clean and dry. The surface is now covered with the sifted rough gravel, and lightly rolled. At the first good shower we shall roll it firmly with a heavy roller, and then will just cover it as thinly as possible with fine-sifted sandy gravel, so as to make it easy for the feet, but so thinly that it will not sink with the feet however wet. A carriage wheel and horses' hoofs will make little impression. Much the same object could be gained by an open bottom for such a large space of gravel, and drains through it, to the main drain at the farther extremity; but we had not the material nor the time at command. We intend to secure the same object of dryness and comfort in all weathers, by the hard level surface, which will cause the rains to pass over it quickly, instead of passing into it. Heavy rains did so well enough formerly, but the drizzling rains sank into the too fine surface made deeper than it ought to have been by the repeated dustings in summer for years to give it a clean, fresh appearance. Our opinion is, that it is a mistake to dig out a great hole for a road, and then fill it up with costly stones, &c. We would rather have the hard natural bottom, excavate but little except at the sides, and keep the hard material on the surface, and that so regulated as to become hard, rounded, and smooth, so that water shall pass over it, instead of sinking into it, or standing on it. It is the ground after all, and not the mere stones, that bears the weight. A road thus made about ten years ago, has given little trouble since, except as regards occasionally levelling heavy cart-wheel marks.—R. F.

COVENT GARDEN MARKET.—SEPTEMBER 4.

Our average prices are scarcely equal to those of last week, and we have a large quantity of goods on hand. The same varieties of Pears and Apples continue to be supplied. Peaches and Nectarines are abundant. The Potato trade is rather heavy.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	1	6	Melons..... each	3	0	5	0
Apricots..... doz	2	0	4	0	Nectarines..... doz.	3	0	6	0
Cherries..... lb.	0	0	0	0	Oranges..... 100	8	0	14	0
Chestnuts..... bush.	0	0	0	0	Peaches..... doz.	4	0	8	0
Currants..... ½ sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black..... doz.	0	0	0	0	Pine Apples..... lb.	4	0	0	0
Figs..... doz.	2	0	3	0	Plums..... ½ sieve	2	6	5	0
Filberts..... lb.	1	0	0	0	Quinces..... doz.	0	0	0	0
Cobs..... lb.	0	0	0	0	Raspberries..... lb.	0	9	1	0
Gooseberries .. quart	0	0	0	0	Strawberries..... lb.	0	0	0	0
Grapes, Hothouse.. lb.	1	6	4	0	Walnuts..... bush.	10	0	20	0
Lemons..... 100	8	0	12	0	Green..... per 100	0	0	0	0

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes..... each	0	3 to 6	Leeks..... bunch	0	3 to 6
Asparagus..... bundle	0	0 0 0	Lettuce.... per score	1	0 1 6
Beans, Kidney, ½ sieve	2	0 3 6	Mushrooms.... pottle	2	0 3 0
Scarlet Runners, ½ sieve	2	0 3 0	Mustard & Cress, punnet	0	2 0 0
Beet, Red..... doz.	2	0 3 0	Onions.... per doz. bchs.	5	0 0 0
Broccoli..... bundle	0	6 1 6	Parsley..... per sieve	3	0 0 0
Brus. Sprouts ½ sieve	0	0 0 0	Parsnips..... doz.	0	9 1 0
Cabbage..... doz.	1	0 1 6	Pens..... per quart	0	6 1 0
Capisiums..... 100	2	0 3 0	Potatoes..... bushel	2	0 3 0
Carrots..... bunch	0	6 0 8	Kidney..... do.	3	0 4 0
Cauliflower..... doz.	2	0 4 0	Radishes doz. bunches	0	2 1 0
Celery..... bundle	1	0 2 0	Rhubarb..... bundle	0	6 0 0
Cucumbers..... each	0	4 0 8	Savoy..... doz.	0	0 0 0
pickling..... doz.	2	0 0 0	Sea-kale..... basket	0	0 0 0
Endive..... doz.	1	0 0 0	Shallots..... lb.	0	8 0 0
Fennel..... bunch	0	3 0 0	Spinach..... bushel	2	0 3 0
Garlic..... lb.	0	8 1 0	Tomatoes..... per doz.	2	0 3 0
Herbs..... bunch	0	3 0 0	Turnips..... bunch	0	6 0 0
Horseradish..... bundle	2	6 0 0	Vegetable Marrows, dz.	1	0 2 0

TRADE CATALOGUES RECEIVED.

T. Sampson, Preston Road Nursery, and Houndstone, Yeovil, Somerset.—*Catalogue of Flower Roots, &c.*

F. & A. Dickson & Sons, 106, Basigate Street, and Upton Nurseries, Chester.—*Catalogue of Select Dutch Flower Roots.*

A. Henderson, Sion Nursery, Thornton Heath, London, S.—*Descriptive Catalogue of Bulbous and other Roots.*

B. J. Edwards, 222, Strand, London, W.C.—*Autumn Catalogue of New and Choice Hyacinths and other Bulbs, Fruit Trees, &c.*

TO CORRESPONDENTS.

.. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

CUCUMBERS DAMPING OFF (J. H. D.).—Thin out the young Cucumbers so as to leave only a few on a plant; give enough of bottom heat, not too much moisture at the roots, and plenty of air if it does not lower the temperature too much; leave on a little air at the top of the sashes all night. Surface-stir the soil frequently.

VINE BORDER—RASPBERRY FAILURES (J. A.).—The Vine border, 24 feet deep in front, may be from 20 to 24 inches deep at back. We would not hesitate to use your stacked-up turf, cut a month since, by the middle of October; but we would only make some 3 feet of the border to enable you to plant the Vines, and next summer you might add a piece more. Last season killed lots of Raspberry canes. We would advise you to take up and replant, so as to fill the ground towards the end of October, mulching with litter as you finish.

BOOKS (A Lover of Flowers).—"Kearne's In-door Gardening," 1s. 6d., "Kearne's Out-door Gardening," 1s. 6d., "Flower Gardening," 4d., "Florists' Flowers," 4d. You can have the whole free by post from our office if you enclose fifty postage stamps with your address. A large and comprehensive work will appear next year. Mrs. London died some years since.

TRANSPLANTING PAULOWNIA IMPERIALIS (H. N. E.).—Your Paulownia, 12 feet high, may be transplanted, and if you do not grudge time we would cut a trench round it—say 2 feet from the ball, in the beginning of October, leave the trench open, merely covering it with some boards and a turf, and then lift the ball, bristling with small roots, in October, 1868. If you want to move the tree this autumn, then shorten and thin the head a little, so as to lessen the evaporating surface, as soon as possible; then when part of the leaves have fallen begin with a trench—say at least 6 feet from the hole, and carefully work the soil from the roots, saving as much of them as possible, and if in addition you can save a small ball all the better. Move the plant carefully on a low sledge, and spread out the roots carefully in the new place, damping them as you do so, but not watering, unless the weather in the end of autumn should be very dry. Next April water, and syringe the tops in hot days.

CONSTRUCTION OF A VINERY (St. E.).—The seeming discrepancy in the "Greenhouse Manual" as to angles of roofs, is owing to one person calculating from one side of the quadrant, and another person from the other side. The evil is generally neutralised by the context. Thus, at page 13, a roof at 30° is said to be low, whilst at page 29, a roof with an angle of from 25° to 35° is said to be more near to the perpendicular than one at an angle of 45°. This is our usual way of describing a roof. One with an angle of 45° is always formed when the width of the house and the height of the back wall above the front wall plate are the same. Thus, if your house were 12 feet wide, the front wall 2 feet in height, and the back wall 14 feet, you would have a roof at an angle of 45°—a very good slope for Vines, Peaches, &c., but not a good one for a general plant-house as well as Vines. On this latter principle, the farther you come back from 45° towards 1°, the steeper will be your roof, until you reach the perpendicular; and the farther you go from 45° towards 90° the flatter will be your roof, a common garden frame, generally having a slope of about 80°. At page 13 it is just the reverse; the low roof at 30° there spoken of is just the same as one 60° would be, counting from the perpendicular. Now, for practical details for general purposes we hold to all that is said of the comparatively low roof. If we were to have a house against our dwelling, 18½ feet long, we would make it 12, 14, or 15 feet in width, ac-

cording as we settled the internal arrangements. Thus, for a house 12 feet wide we would have the front half glass, at least from 5½ to 6 feet in height, and the back wall 13 feet, which would give a good slope for plants, as the winter sun would fall on the upright glass in front; and in this arrangement we would have a platform of 2 feet round the front, a walk of 2½ feet, and a sloping stage from that to the back wall. There can be no simpler mode, nor one by which more plants can be accommodated. If more convenient access to plants is desirable, and easy movement in the house is a great consideration, then we would make the house 14 feet wide, and 14 feet in height at the back wall. You could then have a platform all round, 2 feet 9 inches from the ground, except at the doorway, and 1½ foot wide, a pathway round of 2½ feet wide, a platform in the middle 6 feet wide and 3 feet from the ground, or a hipped stage facing south and north. Camellias, Oranges, &c., might grow against the north wall, above the 1½-foot platform or shelf; or, if keeping plants was your object, the back wall might be filled with shelves from bottom to top, 15 inches apart, for small plants, and a shelf removed when you wanted larger plants there. As respects the rafters described at page 13, we would prefer that they should be 4½ inches deep, and 14 inch wide, which will allow a rebate of half an inch and a bed for the glass of half an inch. These are soon and easily cut by machinery. In default of that, we would tack on a half-inch rebate along the centre of each rafter sash-bar. This is on the presumption that you use glass 18 or 20 inches wide between each two rafters. The two end rafters and one in the centre should be of double width—that is, 9 inches instead of 4½ inch; and if the house is 14 feet wide the rafter sash-bars, when duly fixed in their places, should be joined by a flat rod of iron along the centre longitudinally, and a screw passed through the rod into each rafter. It might also be as well to have a small iron pillar from the floor to this rod in the centre of the house. If the house is only 12 feet wide such supports are not necessary; but the iron rod is a great help for securing the rafters firmly in their places, as then they are kept firm in the middle as well as at the top and bottom.

PLUM TREES GUMMING—PEARS CRACKING (A New Subscriber).—Gum oozing from the fruit of Plum trees indicates great vigour in the trees. The tattered foliage may be caused by insects or violent winds. Pears crack usually from two opposite causes: either there is a deficient supply of sap, or the situation is too cold to permit the fruits' growth in proportion to the sap supplied to them.

TRITELEIA UNIFLORA (A Constant Subscriber).—You proposed charge is very low. An advertisement of not more than sixty words would be 3s. 6d.

VARIEGATED PELARGONIUMS (C. S. S.).—If your six plants were, as you say, equal in growth to your competitor's six, we cannot say upon what ground the judge gave his award. It may have been a question of taste as to the varieties; or the colour, marking, and development of the leaves may have influenced him. There does not appear to us to be any other element in the question.

AZALEAS INFESTED BY THRIPS (Azalea).—The leaves sent us were badly injured by the attacks of thrips, and there is little hope of leaves so seriously damaged as those submitted to us recovering their health and freshness. To save the plants from becoming leafless you must at once commence battle in earnest against this pest. Upon a calm evening shut the house up quite close, and fill it with tobacco smoke so effectually that a plant cannot be distinguished through the glass from the outside. The following morning avoid giving air if possible, and sprinkle every available surface with water, but avoid wetting the foliage of the plants. If the day be hot it will be well to admit air and to shade the glass if practicable, so as to lessen the necessity for air-giving. In the evening syringe the plants forcibly with water, directing it against the under sides of the leaves, and again the following morning early, giving air freely before the sun shines powerfully upon the plants. In the evening, the foliage of the plants being quite dry, fill the house again with tobacco smoke as effectually as before, and keep as close as possible the following day, shading the glass to lessen the necessity for air-giving. Syringe the plants morning and evening for the next week, and fill the house with tobacco smoke once a week for a month, taking care to have the foliage of the plants dry before fumigating with tobacco. The cause of the attacks of thrips is hard to explain, but they are mainly attributable to the maintaining of the plants in a warm, dry, badly ventilated atmosphere. The best preventive is securing a moist, cool, well-ventilated atmosphere, and the remedy is to fill the house with tobacco smoke whenever a thrips is seen.

CARROTS FAILING (Victor).—From the description given, we think your Carrots are infested by the Carrot fly (*Pila rosea*), which causes the leaves to turn yellow, and is known to gardeners as the rust. Plants attacked by it should be pulled up, and, as a preventive measure, the ground intended for Carrots may be dressed with sand saturated with spirits of tar, at the rate of half a gallon to 30 square yards. We never have any of the attacks of this pest, nor of the maggots of the crane fly (*Tipula oleracea*), and all we do is to trench the ground and throw it up in ridges for the winter, and in February to fork over the ground, throwing it level, giving early in March a good dressing of soot and lime at the rate of a barrowful to 10 square yards, and neatly pointing it in with a fork.

WEEDS ON CROQUET LAWN (Idem).—The best plan of eradicating the Plantains, Dandelions, and other weeds, is to grub them up by the root with an old knife or spud, and any time between now and next April is a good time to do it, selecting showery weather. In March you may apply a liberal dressing of rotten manure or rich compost, and, giving it a good scratching with an iron rake, early in April sow, with the earliest prospect of rain, 4 lbs. *Festuca tenuifolia*, 4 lbs. *Festuca duriuscula*, 4 lbs. *Cynosurus cristatus*, 2 lbs. *Poa nemoralis*, and 2 lbs. *Trifolium minus*, and 4 lbs. *Trifolium repens*, adding 1 lb. *Lotus corniculatus minor*. We presume your soil is light and the grass thin, and subject to burn or brown in summer. After sowing roll well, and allow the grass to grow a good length before it is mown. Keep well rolled.

BROWN BEURRÉ PEARS GATHERING (Beurré).—The Brown Beurré Pear is fit to gather generally early in October, but is influenced by the season. When the fruit parts freely from the tree it is fit to gather. The price is so dependant on the plenty or scarcity of fruit, that we cannot say what the price per bushel should be. Consult a fruiterer.

VERTICAL CORDON FRUIT TREES TRAINING (E. S.).—Fruit trees vertical-cordon trained may be planted against a wall, or be planted independently in borders, just as they are hardy or require protection.

RED SPIDER ON CUCUMBER PLANTS (*A Young Beginner*).—The atmosphere of your house has been kept much too dry, otherwise we think your plants would not be so badly infested with the red spider. As you syringe the house twice a-day, have painted the pipes, and syringed the plants with sulphur and water, we only know one more thing you can do, and that is to sprinkle the paths, walls, and every available surface other than the plants two or three times a-day with guano water, 2 lbs. being dissolved in twenty gallons of water. If you have trough pipes or evaporation-pans, you may keep them filled with the guano water. You will do little good with your old plants for the furnishing of fruit in winter. It is now quite time to sow the seed (better if it had been done a fortnight earlier), of Cucumbers intended for winter fruiting. The plants need not be syringed in winter, but the atmosphere may be kept moist through the agency of evaporating-troughs filled with water, or the sprinkling of the paths, walls, &c., with water twice daily, which will be regulated by the foginess and severity of the weather.

TULIPS FOR FLOWERING AT CHRISTMAS (*Idem*).—The best single Tulips for early forcing are *Duc Van Thol*, vars. common, gold-striped, scarlet, rose, white, and yellow; *Keizers Kroon*, *Canary Bird*, *Pottebakker* (the red-striped, white, and yellow), *Proserpine*, and *Vermilion Brilliant*; and *Duc Van Thol*, *Tournefoul*, *Yellow Tournefoul*, *Imperator Rubrorum*, and *Rex Rubrorum* of the double varieties.

WATERING MUSHROOM-BED WITH BOILING WATER (*Idem*).—We do not think the watering the bed before spawning would do any harm to the bed providing it were very dry; but if at all moist, the watering of the bed for the purpose of destroying woodlice would make the dung so wet as to be destructive to the Mushroom spawn. Boiling water will destroy Mushroom spawn in whatever stage, and wet dung is equally destructive, and prevents the running of the spawn. You may thin the woodlice by placing a boiled Potato at the bottom of a flower-pot, wrapped in a little hay, and laid on its side; this will catch many. A number of such traps will keep them from the Mushrooms.

ROSES FOR A GREENHOUSE (*W. H. S.*).—Three good climbing Roses for a greenhouse are *Maréchal Niel*, yellow; climbing *Devoniensis*, white, yellow tint; and *Gloire de Bordeaux*, rose. All are Tea-scented; but as you wish for red Roses you may plant *Lord Macaulay*, *Charles Lefebvre*, and *Seigneur Vaisse*, all Hybrid Perpetuals. All are good Roses. A good Rose for a wall is *Docteur Renschler*, Hybrid Perpetual, and *Sir Joseph Paxton*, Bourbon.

PRUNING ELDER TREES (*J. J. W.*).—The only system that we know of pruning Elder trees is by cutting away the old wood, and keeping them within bounds by taking off the tops of the long straggling shoots. If subjected to much pruning they will not fruit well, and the less they have the better.

COVERING FRUIT TREES (*Idem*).—The covering of fruit bushes with muslin or netting to protect the fruit from birds or wasps, does prevent the sun and air from getting at the plants to the injury of the fruit if put on before the fruit is ripe; but it does no great injury if not placed over the bushes until the fruit is ripe. Muslin is bad for the after well-being of the trees, as it deprives them of the sun and air so necessary for the preservation of the foliage in health. When the trees are covered with netting we have not found the fruit at all deficient in flavour, nor the trees in the least injured by it. The case is very different when the trees are enveloped in a stifling bag of muslin or in mats, to protect and keep the fruit to a late period. Covering is then injurious to both trees and fruit.

CALIFLOWERS RUNNING (*Idem*).—The chief causes of plants running prematurely to seed are too thick sowing, allowing the seedlings to stand too long in the seed-bed before planting, and neglecting to prick them off, and plant them out whilst young, or before they become large. If the plants are pricked-off from the seed-bed when large enough, which is when they have made a pair of rough leaves in addition to the seed-leaves, transplanting them with a ball when they are of a moderate size into good well-manured ground, and giving them an abundant supply of water during dry weather, we apprehend you may enjoy nice heads of this esteemed vegetable. Plentiful supplies of water, and moving whilst young, are the grand secrets of growing Califlowers and Lettuces during dry hot weather. Liberal supplies of liquid manure are also good, but nothing will compensate for keeping the seedlings too thick in beds and too long, and manure is an essential.

CUTTING DOWN RHODODENDRONS (*A Subscriber, County of Cork*).—You may cut down the grafted *Rhododendrons* immediately they have flowered, but not cut below where grafted, or the plants will be in their original state—i. e., common sorts. They must be cut some distance above the union of stock and graft to allow for new shoots to come upon the graft, and any shoots that come from the stem or root below the junction of the stock with the graft, should be removed.

CALCEOLARIAS FAILING (*T. J. A.*).—The specimens you sent us are destroyed by rust. We know of no remedy. Herbaceous *Calceolarias* are best raised from seed sown in July, and placed in a shady place until the plants are grown a little. When they are showing their rough leaves the plants should have air by tilting the hand-glass, placing a brick under each of the corners, and when they are large enough to handle they may be pricked off in pans about an inch apart, and be placed in a cold frame. They should be kept moist, have abundance of air, and shade from bright sun, potting them off singly into small pots when they have grown so as to require more, every plant being taken up with a ball. The compost used for potting may consist of two-thirds loam from rotted turves, and one-third leaf mould. They may be returned to the frame, and should not be boned, but kept in and grown on in the frame until severe weather is likely to set in. When the pots are full of roots shift the plants into pots a size larger, and this repeatedly until they are transferred to their blooming-pots, which need not exceed 9 inches in diameter. The plants cannot have too little heat, only secure them from frost, nor be kept too well aired, nor too near the glass in a greenhouse. The shrubby kinds are best struck and wintered in a cold frame, affording them protection from severe frost, air being plentifully furnished them in mild weather, and in March they may be pricked out or transplanted in beds of good rich soil, 3 to 6 inches apart, giving them the protection of any covering from frost you may have at hand. The essentials are coolness, abundance of air and light, with moisture, a moderately rich and open soil, and no sudden checks or changes of any sort.

CINERARIAS FOR AUTUMN BLOOMING (*Idem*).—*Cinerarias* for autumn and winter bloom should be raised from suckers, offsets, or seeds sown in

March, the plants having every attention in the shape of potting them off when large enough to handle, and repotting as soon as the pots are filled with roots. After May they will do better in a frame than in a greenhouse or other house, as they can be kept more moist, and are much nearer the glass and cooler. They should be sprinkled overhead every evening, and have an abundant supply of fresh air. They should be placed in their blooming-pots not later than September.

SEA-SAND FOR STRIKING CUTTINGS (*Idem*).—Sea-sand is not desirable for striking cuttings of plants, nor for use in potting them. We would not use it for any purpose, except for dressing *Asparagus* and *Sea-kale* beds.

HAEROTHAMNUS ELEGANS (*Idem*).—The shoots should be trained upon the trellis moderately thin, so that every shoot may have a due share of light and air, it being sufficient if they do not cover or overhang each other's foliage. You cannot have the plants flower at the bottom so well as at top, unless you are prepared to give the plant the same amount of light at bottom as its shoots have at top.

PLANTING PINES, PICEAS, AND OTHER EVERGREENS (*A. W.*).—The best time to plant these trees is as soon after the growth is made as the weather is moist or showery. From the middle of September to the middle of November is a good time, but the earlier it is done the better, and evergreens are no exception; all will do better planted in September than at a more advanced season, winter being the worst time of all to plant evergreens of all sorts. The planting is best done during showery weather, but dry weather is preferable to planting when the soil is no more than so much mud. Deciduous trees should not be planted until the leaves are beginning to fall. The manuring of trees at the time of planting is a bad practice, unless the manure is placed at a short distance from and not in immediate contact with the roots, and it ought to be well mixed with the soil. Some rich compost placed in the hole made for the trees, and around the roots, is very beneficial, and is far better than manure in any way. If you could manure the trees a year or two after planting it would favour their speedy growth, giving it in the form of a top-dressing, and neatly pointing it in, but not so deeply as to injure the roots by disturbing them.

PASSIFLORA QUADRANGULARIS FLOWERS NOT SETTING (*Amateur*).—We think your house is much too warm at night. We would lower the temperature 10°, and reduce the flowers by one-half, giving a plentiful supply of air, and keeping the atmosphere rather drier for a few days, and the roots well supplied with water.

PEAR TREE INFESTED WITH SCALE (*Pear Tree*).—The pest infesting your Pear tree is that of *Aspidiotus ostryæformis*, or Pear-tree Oyster Scale which you cannot now remove, except with the point of a knife or similar instrument, and it is well worth while removing it from the fruit, as it very often seriously disfigures them at or near the shank. The best remedy is to unnaul the tree, if against a wall, and wash every branch and shoot with a stiff or half-worn paint-brush, giving every part a good scrubbing, but being careful of the bloom-buds or spurs, so as not to injure them, and yet free them of the enemy. The solution with which the trees are to be washed consists of 8 ozs. of soft soap dissolved in a gallon of water. It should be done immediately the leaves fall, and should be repeated—i. e., the brushing and scrubbing, two or three times, but not the washing with the soap solution, for this must be reduced in strength, 6 ozs. being sufficient for a gallon of water as spring approaches. As a preventive, the tree may be dressed in February with a composition formed of the soap solution previously named, and brought to the consistency of paint by adding equal parts of fresh soot, lime, and sulphur vivum, applying it with a paint-brush to every shoot or branch, working it into any hole, angle, or crevice.

CORFOPIS (*Heuley*).—The flowers of this genus, to a common observer, resemble those of *Calliopsis*. Even *De Candolle* says that the two genera scarcely differ.

SALPIGLOSSIS FOR BEDDING (*Idem*).—The *Salpiglossis* is no great plant for a bed, as the varieties grow too tall, are not sufficiently profuse-blooming, and do not continue long enough in bloom to enter the lists as bedding plants. They certainly are very fine plants for beds and borders, but not for placing in beds adjoining masses of *Pelargoniums* and *Calceolarias*. They flower for a long time, usually until late in September. They are not like *Petunias*, and are vastly inferior to them for bedding-out purposes.

POISONING CATS (*Idem*).—We know of no law forbidding the putting of poisoned meat among garden crops.

VINE LEAVES DISEASED (*T. W.*).—No 1 leaf enclosed to us is infested with the Vine scale (*Coccus vitis*). It may be destroyed by stripping off the loose bark when the leaves have fallen, and thoroughly cleaning the stem and shoots by washing them with soft soap and warm water, 6 ozs. soft soap being dissolved in a gallon of water. The water should not be cooler than 120°, nor exceed 130°. In addition to washing the Vines, the whole of the woodwork should be thoroughly cleansed with the soap solution, keeping it off the glass, and the walls coated with a mixture of lime and sulphur, with sufficient tobacco water to bring it to the consistency of whitewash. It should be put on like whitewash. No 2 leaf is scorched, probably through the leaves being moist when the sun shone powerfully upon the glass before air was given, or the injury may have been caused by the leaves being very near the glass, or some injurious agent employed for the destruction of insects.

ORCHIDS (*H.*).—There are very many genera, and, of course, hundreds of species. In the "*Orchid Manual*," published at our office, price 2s. 6d., you will find descriptions and directions for the culture of those suitable for a stove and a greenhouse, as well as those which are hardy.

FERNS (*W. H.*).—*Polystichum proliferum* is a native of Van Dieman's Land, and consequently disqualified your collection shown for the prize for native Ferns.

GRAPES DISEASED (*A. Z.*).—The berries enclosed are severely affected with "the spot." Remove the soil down to the first tier of roots in the inside border, and replace it with some rich compost, and water once a-week with weak liquid manure, of a temperature rather warmer than that of the house. Remove the diseased berries as they appear; thin the bunches a little generally, and admit air freely during the day and night. (*Omega*).—The bunch you sent was affected in a similar manner. Treat your Vines similarly. We never recollect of the disease being more general than it has been this season.

NAMES OF PLANTS (*W. Dean*).—1, *Erica aristata cillata*; 2, *E. jasminiflora minor*; 3, *E. Massonia*; 4, *E. aristata*; 5, *E. aristata minor*; 6, *E. princeps*; 7, *E. aristata*, var. (*G. M.*).—*Spiræa sorbifolia*. (*J. S.*)—

1, *Lastrea Filix-mas*; 2, *Lastrea dilatata*; 3, *Athyrium Filix-fœmina*; 4, *Athyrium Filix-fœmina* (young state); 5, *Aspidium aculeatum*; 6, *Cystopteris fragilis*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending September 3rd.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 28	30.118	30.083	73	51	62	60	S.W.	.00	Fine; cloudy; clear and fine at night.
Thurs. 29	30.150	30.088	72	48	62	60	S.	.13	Cloudy; very fine; cloudy at night.
Fri. . 30	30.084	29.924	73	49	63	60	S.	.00	Fine; very fine; clear.
Sat. . 31	29.858	29.812	78	65	63	60	S.E.	.00	Fine; exceedingly fine; overcast at night.
Sun. . 1	29.919	29.818	80	45	65	61	S.E.	.00	Overcast; exceedingly fine and hot; very fine.
Mon. . 2	30.072	30.041	78	59	64	61	S.E.	.20	Very fine; exceedingly fine; clear.
Tues. . 3	29.982	29.868	74	53	65	61	S.E.	.22	Violent thunderstorm; overcast and warm; low fog.
Mean	30.026	29.948	75.00	52.86	63.43	60.43	..	0.55	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

TESTIMONIAL TO MR. HEWITT.

HAVING seen Mr. Jessop's letter in your last number, will you allow me to say that as an exhibitor I most fully concur in that gentleman's estimate of Mr. Hewitt as a poultry judge? In strict impartiality, in ability, and in thorough-going devotion to his duties, I believe him to be unsurpassed. I think with Mr. Jessop, that the poultry world owes Mr. Hewitt a debt for his great services in what must be always a task of responsibility and sometimes a thankless office. I bear my testimony with the more readiness, as I have not the slightest personal acquaintance with Mr. Hewitt, whom I only know and respect as a judge of poultry. I agree with your suggestion that the subscriptions to the testimonial should not be limited either one way or the other to any given sum, and shall be most ready to contribute a guinea for so good an object.—JOHN PARES, *Postford, near Guildford*.

It is with sincere gratification that I notice the communication of Mr. Jessop, in your last issue, proposing a testimonial to Mr. Hewitt, so long known, and so highly respected as a judge of poultry. I most cordially concur in the object, and most fully endorse the encomiums your correspondent has passed on Mr. Hewitt, for his integrity in the office he has filled, and the general approval his decisions have met with.

My object in troubling you with this, is, however, of a more practical nature. It is to say that I shall have sincere pleasure in forming one of a committee for carrying out the proposal, and beg to add that you may command my services in that or any other way in which I can promote the object.

I quite agree with you that it would be undesirable to limit the individual contributions, and that whilst the smallest contributions would be readily received, an opportunity should be afforded to those who have the means of contributing sums more adequately expressing the esteem in which they hold Mr. Hewitt's services. May I venture to hope that you will reconsider your determination to decline active participation in this effort? In my opinion it is most desirable that one of the Editors of your Journal should be on the committee, and I trust that further reflection on the subject may lead you to change your decision on that point.—JAMES FLETCHER.

[We had well considered the subject before we announced that we could not be on the Committee, and we cannot reverse our determination. That we shall heartily aid in every way a Committee formed for carrying out the proposal needs no promise from us. If Mr. Fletcher will obtain the co-operation of two or more friends, circulate proposals, and state to whom subscriptions may be paid, the desired result would be speedily secured. We advise it to be done promptly. And let us commence what we know will be a good subscription list with

The Proprietors of THE JOURNAL OF HORTICULTURE.. £10 0 0
J. Pares, Esq..... 1 1 0

We have heard already of some who profess to be willing to subscribe, but ask, if they did subscribe whether their motives might not be misconstrued? We think that there is not the slightest ground for such a fear; but if any one does entertain such an unworthy misgiving, let him subscribe anonymously as "A Friend," or "An Admirer."—EDS.]

FRENCH BREEDS OF POULTRY.

As one of the most staunch supporters of Houdans, I might almost say their earliest friend in introducing them to English poultry keepers, I am delighted to read my late colleague Mr. Massey's eloquent description, and am content, like the non-loquacious member, to add simply, "I say ditto to Mr. Burke."

I cry aloud with "LINDUM" for distinct classes for French breeds at exhibitions. At least let us have one class for Houdans, and be content to lump the rest together yet awhile. I have exhibited the same two pens of Houdans and La Flèche at Birmingham, Rochdale, and Salisbury. The La Flèche had the first prize at Birmingham and Salisbury; the Houdans at Rochdale. When Crève Cœurs have been included in the variety class, then the change has been rung with them likewise. What are judges to do? Evidently, as it is a variety class, distribute their favours variously. As for judging by comparison, that is hardly possible. I think the French breeds ought to stand alone.

Mr. Massey confines his remarks to the Houdans, Crève Cœurs, and La Flèche, but let me say a word also for their first cousins Gueldres and Bredas. Hardy as Houdans, as good egg-layers; not quite the table birds, not having, what in our wet climate is certainly a drawback, the full crest, but close, clean-looking, lively birds, I class them immediately after Houdans. For my own part I prefer the handsome Cuckoo Gueldre to his black cousin the Breda. There is not the slightest doubt that in Houdans, Gueldres, and Bredas we have fowls that will increase in favour the better they are known.—FRED. H. SCHNÖDER, *Rickmansworth, Herts.*

HOUDAN FOWLS.

I OBSERVE in your Journal of August 15th a paragraph signed "LINDUM," and I find that he states that Houdan fowls possess valuable qualities unsurpassed by any breed. This I can bear testimony to, having only four hens, which have laid more eggs this spring and summer (even one has laid regularly since November), than all my Cochins-China, Spanish, Hamburgs, &c.; and, moreover, they never incubate.

"LINDUM" asks whether it is indispensable that Houdans should have muffs. Certainly, to correspond with the cock bird, if he has one; some are without, and some have them. Of course all three birds in the pen should match each other. This was not the case at Thirsk with that which gained the second prize, and the birds were too small. This I consider detrimental, although the judges gave the prizes to them. With regard to the Ronen Ducks, I always understood that they should have bills similar to the wild ones. This was not the case with two pens at Thirsk.—AN AMATEUR BREEDER.

CITY COLUMBARIAN SOCIETY.

THIS Society held its first meeting for the season on Thursday last, at the Crown and Cushion Tavern, London Wall. There was a numerous attendance of members and visitors, and a superior show of young birds (this occasion being for young birds only), although the remark generally among breeders was that it had been a very bad season for young birds, owing to the sudden changes of the weather.

Short-faced Tumblers, for which this Society stands unrivalled, were well represented by birds from Messrs. Chapman, Hales, Gellott, Young, and Ford; Pouters and Carriers (of which there were many

promising birds), by Messrs. Volkman, Dennington, Evans, Fulton, Sinter, and Reeves.

The Society is in a very prosperous condition, and members are being enrolled at most meetings.

At the next meeting, which is to take place on the 26th inst., it is expected there will be a very good show of adult birds of all classes, several members having promised each to fill a pen of such birds as will not only be a credit to themselves, but also to the Society. Visitors are admitted with a member's card, or by forwarding their card or name, according to the rules of the Society.—COLUMBIAN.

HALIFAX AND CALDER VALE POULTRY SHOW.

This Society was first established in 1839, consequently the present year is that of the twenty-ninth exhibition. It has been invariably well supported, and luckily for the coffers of the Committee, the weather on each annual Show has been almost without exception of a favorable character. As is too generally the custom of poultry committees, where this part of the show is attached to an agricultural society, the penning of the poultry was delayed until nearly, if not quite, the time for the public admission of visitors. This causes a serious impediment to the expeditions and careful awarding of the premiums by the judges. Exhibitors are naturally interested in the success of their own birds, and staunch as an old pointer (if kept by the ruling powers out of ear-shot of the arbitrators), they still not unfrequently make a dead set opposite their own pens, for purposes that it requires but little sagacity to imagine. The Halifax pens are of a construction especially adapted for the production and display of this habit, for although the tops, bottoms, and ends are of wood, both fronts and backs are alike open wirework. The public being thus admitted, many exhibitors are constantly attending the opposite side of the show pens to that appointed for the arbitrators, so long as personal interest individually operates. Another disadvantage of pens open at both front and back is this—if an arbitrator closely approaches a pen for careful inspection, the birds being alarmed at once turn entirely round, endeavouring to escape at the rear; and thus to take out Game cocks becomes a matter of extreme difficulty, for they must either be taken out for an examination by hand, tail first, to the great probability of injury to the plumage, or the dangerous risk of being struck must be incurred by turning the bird, when thus excited, by hand within the pen. That the birds shown in such pens are more readily seen by the great numbers of people attending is freely admitted; and as the Show at Halifax only remains open a very few hours, this is no doubt essential; still, during the judging, it is a great disadvantage that might be easily corrected, and one which never occurs where the pens are open-work on all sides; for then the poultry play round, instead of running directly from front to back, or the contrary.

The collection of both Poultry and Pigeons was remarkably good, *Spanish* being a first-rate class, especially the chickens. Adult *Dorkings* invariably show to greater disadvantage than most varieties of poultry at the moulting season, consequently they require but slight mention; the Dorking chickens, however, proved one of the greatest attractions of the Show; the Hon. H. W. Fitzwilliam's two prize pens contained decidedly some of the best-grown chickens that have been exhibited as yet this season. *Cochins* were good. Messrs. Sidgwick, of Keighley, and Mr. Stretch, of Ormskirk, exhibited most creditable pens. The *Brahmas* were very good, but not equal to some others exhibited this season. *Game* fowls were abundant, Mr. Brierley and the Rev. J. Mellor taking a large share of the premiums. *Hamburgs* proved good classes throughout; the Black varieties seem of late very much improving. A most excellent Variety class left Colonel Stuart Wortley in receipt of additional honours, though the National Poultry Company, on this occasion, successfully contested for several prizes. Some very excellent *Cochin Bantams* were shown, and some Black and Silver-laced ones, that were also good. *Bahama Ducks*, *Carolinas*, and *Shell Ducks* were a great addition to the fancy department. *Turkeys* and *Geese* proved of unusual merit. A very curious "cross" between the Sebastopol and Spanish Goose was a unique feature of the Show, and most interesting.

Of *Pigeons* the entry was nearly 120 pens, and this portion of the Exhibition had many admirers. Most of the principal exhibitors were represented, and the show of these birds, therefore, has never yet been equalled at Halifax.

SPANISH.—First, J. Thresh, Bradford. Second, H. Beldon, Goitstock, Bingley. Highly Commended, J. Hey, Huddersfield. Commended, T. Marchant, Halifax. *Chickens.*—First, H. Beldon. Second, J. Newton, Silegh. Highly Commended, W. Paterson, Langholm; M. Farrand, Huddersfield. Commended, T. Marchant, Halifax.

DORKINGS.—First, W. H. King, Wakefield. Second, F. Key, Beverley. Highly Commended, Mrs. Dale, Scarborough. *Chickens.*—First and Second, Hon. H. W. Fitzwilliam, Rotherham. Highly Commended, T. Pomfret, Preston. Commended, Rev. J. F. Newton, Kirby-in-Cleveland, Stokesley; Mrs. Dale; C. W. White, Driffield; W. A. Taylor, Manchester. **COCHIN-CHINA** (Cinnamon, Buff, or Lemon).—First, H. Beldon. Second, W. A. Taylor. Highly Commended, C. Sidgwick, Keighley. *Chickens.*—First, C. Sidgwick. Second, R. E. Brown, Warr, Oswaldkirk, York. Highly Commended, C. Sidgwick; R. Loft, Woodmansey, near Beverley.

COCHIN-CHINA (Partridge).—First, T. Stretch, Ormskirk. Second, C. W. Brierley. Highly Commended, C. Sidgwick. *Chickens.*—First, W. A.

Taylor. Second, C. Sidgwick. Commended, J. Horrocks, Tonge, Middleton; F. Crossley, Elland.

COCHIN-CHINA (Black, White, or any other variety).—Prize, R. Loft. **BRAHMA** POOTRAS (Light).—Prize, H. Dowsett, Pleshey, Chelmsford. *Chickens.*—First, H. Dowsett. Second, W. Whiteley, Sheffield.

BRAHMA POOTRAS (Dark).—First, H. Lacy, Helden Bridge. Second, W. Hargreaves, Bacup. Commended, H. Dowsett. *Chickens.*—First and Second, H. Lacy. Highly Commended, Rev. J. E. Newton; G. H. Roberts, Penwortham, Preston. Commended, J. H. Pickles.

GAME COCK (Any colour).—First, C. W. Brierley. Second, Rev. W. J. Mellor, Nottingham. Highly Commended, J. Firth, Halifax; J. Mason, Worcester. Commended, W. Carver, Southwam.

GAME HEN (Any colour).—First, C. W. Brierley. Second, G. Pickles, Banks, near Mytholmroyd. Highly Commended, E. Aykroyd, Bradford; Rev. W. J. Mellor. Commended, J. Mason; W. Whewell, Radcliffe, near Manchester.

GAME (Black-breasted Reds).—First, Rev. W. J. Mellor. Second, C. W. Brierley. *Chickens.*—First, P. Scott, Saltaire, Bradford. Second, A. D. Edwards, Huddersfield. Highly Commended, A. D. Edwards; G. Noble, Dewsbury.

GAME (Brown-breasted and other Reds).—First, E. Aykroyd, Bradford. Second, A. D. Edwards. Highly Commended, C. W. Brierley. *Chickens.*—First, J. Pickles. Second, Rev. W. J. Mellor. Commended, J. Firth.

GAME (Duckwing Grey and Blue).—First, Rev. W. J. Mellor. Second, J. Fell & Sons, Adwaton, near Leeds. *Chickens.*—First, J. Fell & Sons. Second, J. Firth. Highly Commended, J. Fortune, Keighley.

GAME (White and Pile).—First, C. W. Brierley. Second, G. Hartley, Gomersal, Leeds. *Chickens.*—Prize, W. Walker, Gomersal.

GAME (Black or any other).—Prize, A. D. Edwards. *Chickens.*—First, J. Brook, Gomersal. Second, G. Hartley.

GAME COCKEREL (Any colour).—First, J. Firth. Second, Miss A. Fawthrop, Southwam. Commended, J. Fell & Sons, Leeds; T. Bottomley, Shelf; J. Longbottom, Halifax.

GAME PULLET (Any colour).—First, E. Redman, Ovenden. Second, Rev. W. J. Mellor. Highly Commended, J. Longbottom. Commended, J. Pickles; J. Mason.

POLANDS.—First and Second, H. Beldon. *Chickens.*—First, H. Beldon. Second, Mrs. E. Proctor, Hull. Highly Commended, H. Beldon.

HAMBURGERS (Golden-pencilled).—First, H. Beldon. Second, S. Smith. *Chickens.*—First, H. Pickles, jun. Second, J. Preston, Allerton, near Bradford. Highly Commended, S. Shaw; S. Smith.

HAMBURGERS (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, jun. Highly Commended, H. Beldon. *Chickens.*—First and Second, W. and J. Baislow. Highly Commended, H. Beldon.

HAMBURGERS (Golden-spangled).—First, H. Beldon. Second, H. Coldwell, Northgate, Holmfirth. *Chickens.*—First, J. Preston. Second, J. Roe, Huddersfield, near Manchester. Commended, H. Beldon.

HAMBURGERS (Silver-spangled).—First, H. Pickles, jun. Second and Highly Commended, H. Beldon. *Chickens.*—First, T. Robinson, Baildon. Second, T. Fawcett, Baildon. Highly Commended, Messrs. Ashton and Booth, Mottram, Cheshire. Commended, J. A. Taylor; H. Beldon.

HAMBURGERS (Black, White, or any other variety).—First, S. Shaw, Stainland. Second, C. Sidgwick. Highly Commended, H. Beldon. *Chickens.*—First, C. Sidgwick. Second, S. Shaw. Highly Commended, C. Sidgwick. Commended, H. Beldon.

ANY OTHER DISTINCT BREED EXCEPT BANTAMS.—First, National Poultry Company, Bromley, Kent (Houdan). Second, Hon. Col. Stuart Wortley (La Flèche). Highly Commended, National Poultry Company (Crève Cœur, Pduze Chamois); P. Winkleman, Gomersal (Crève Cœur). *Chickens.*—First, M. Riley, Ovenden (Andalusian). Second, National Poultry Co. (Houdan). Highly Commended, Hon. Col. Stuart Wortley (Crève Cœur); National Poultry Company (Crève Cœur).

GAME BANTAM COCK (Any colour).—First, G. Noble. Second, C. W. Brierley.

GAME BANTAMS.—First, G. Noble. Second, W. F. Entwistle. Commended, R. Bentley, Bawtry; Rev. W. J. Mellor; J. Walker, Halifax; J. Firth; J. Oates, Halifax.

BANTAMS (Gold or Silver-laced Sebright).—First, S. & R. Ashton, Mottram, Cheshire (Silver). Second, T. C. Harrison, Hull (Silver). Commended, Messrs. Akroyd & Scott, Sunderland (Gold); T. Walker (Silver).

BANTAMS (Any other variety).—First, T. Burgess (Cochin Bantams). Second, R. Bentley, Bawtry (White Japanese). Highly Commended, S. and R. Ashton (Black); S. A. Wyllie, East Moulsey (White Japanese); W. A. Taylor (Black); T. Burgess (Black). Commended, Mrs. Dale (White); S. Rhodes, Normanton (Black).

DUCKS (Aylesbury).—First, E. Leech, Rochdale. Second, M. Farrand. Highly Commended, M. Farrand; Messrs. Bowman & Fearon, Whitehaven. **DUCKS** (Rouen).—First, E. Leech. Second, S. Shaw. Highly Commended, E. Leech; S. Shaw; C. Sidgwick; T. Dean, Keighley.

DUCKS (Any other variety).—First, S. Shaw (Bahamas). Second, C. W. Brierley (Shell Ducks). Highly Commended, C. W. Brierley (Carolinas). Commended, A. D. Edwards (Wild); S. A. Wyllie (Grey Cail).

GESE.—First, S. H. Stott, Rochdale (Toulouse). Second, E. Leech. Commended, R. Bentley. *Goslings.*—First, S. H. Stott. Second, E. Leech. Commended, S. Shaw.

TURKEYS.—First, E. Leech. Second, J. Ogden, Halifax. *Poult.*—First, Rev. W. J. Mellor. Second, E. Leech. Commended, Mrs. Dale; J. Clegg, Gretland.

PIGEONS.

POUTERS OR CROPPERS.—*Cock.*—First and Second, F. Crossley. *Hen.*—First and Second, F. Crossley. Highly Commended, S. Shaw.

CARRIERS.—*Cock.*—First and Second, F. Crossley. Highly Commended, G. H. Roberts. *Hen.*—First and Second, F. Crossley. Highly Commended, G. H. Roberts.

TUMBLERS (Almond).—First, F. Key, Beverley. Second, F. Crossley. Highly Commended, J. Fielding, jun., Rochdale.

TUMBLERS (Mottled).—First, S. Shaw. Second and Highly Commended, J. Hawley.

BALDS OR BEARDS.—First, J. Lister. Second, J. Fielding, jun. Highly Commended, J. Percival.

OWLS.—First, J. Fielding, jun. Second, F. Crossley. Highly Commended, S. Shaw; J. Fielding, jun. Commended, F. Crossley.

TURBITS.—First, E. Horner, Harwood, Leeds. Second, J. Thompson, Bingley. Highly Commended, S. Shaw.

JACOBINS.—First, S. Shaw. Second, E. Horner. Highly Commended, J. Thompson.

FANTAILS.—First, S. Shaw. Second, J. Hawley. Highly Commended, A. Parry.
BARBS.—First, M. Hedley, Redhill, Surrey. Second, E. Horner. Highly Commended, F. Crossley.
DIAGONS.—First F. Crossley. Second, S. Shaw. Highly Commended, J. Porcivall.
TRUMPETERS.—First and Second, E. Horner. Highly Commended, S. Shaw.
MAGPIES.—First, S. Shaw. Second, H. Yardley, Birmingham.
ANY OTHER BREED.—First, A. Parry. Second, H. Yardley. Highly Commended, S. Shaw; H. Yardley.

Edward Hewitt, Esq., of Sparkbrook, Birmingham, was the Judge of Poultry; and T. J. Charlton, Esq., of Chapel Thorpe, near Wakefield, of Pigeons.

ROYAL AGRICULTURAL SOCIETY OF IRELAND'S POULTRY SHOW.

(From a Correspondent.)

THE annual Show under the auspices of the Royal Agricultural Society of Ireland, was held at Stephen's Green, Dublin, on the 28th, 29th, and 30th of August. A situation better calculated to bring together the strength of the agriculture of Ireland could not have been chosen, than the metropolis of that country, as the railway communication converges there, and in the metropolis there is not to be found a more beautiful and spacious "Green," than that called after St. Stephen. It is nicely planted with evergreens and flowers that added much to the effect of the assembly, which was very extensive, and to this result the fine weather can be attributed not a little.

Curious to say, the first objects that caught my attention were two sheds, one on each side of the space at the entrance, filled with poultry, and I must really congratulate this worthy Society for the admirable pens constructed for the accommodation of our pets. I mention this as one of the steps in the right direction which this Society has made. It is to be regretted that there were not enough of these new pens, which necessitated the employment of the old ones belonging to the Royal Dublin Society, which are everything that could be abused for dirt and smallness of size. However, in the absence of better they had to be made available. I think, also, that at all poultry shows the pens ought to be ready before the birds arrive, and I am sorry to say at this Exhibition it was the reverse, as when I went into the Show, when the judging ought to have been over, I saw men making pens, and gentlemen penning their own birds.

I hope to see this Society, which has done so much for agriculture, advance still further. I mean in the way of judges. If the Society would choose a single gentleman in whom exhibitors have every confidence, and let every one know that such an Arbitrator was to fill that office, I feel confident they would largely increase the number of Irish entries, and also induce many more of the English and Scotch fanciers to come over. I would also suggest a remodelling of their liberal prize list, there being several classes with only one pen.

There were in all 270 pens of poultry and Pigeons, of a very fair class indeed on the whole. When I mention such names as the Hon. H. W. Fitzwilliam, Col. S. Wortley, Mr. R. W. Boyle, Mr. F. W. Zurhorst, and Mr. J. C. Cooper, all well known as poultry exhibitors in England, I need say no more, but tender a few remarks on the judging.

I presume that the Judges having so much to do must have caused some of the mistakes, one of them having judged thoroughbred horses and hunters; another adjudicated on the sheep. Their names were Mr. Thomas Morris, Mr. James S. Turner, and Mr. Henry Thurnell. The first classes were for Coloured or Silver-Grey *Dorkings*, and here in both old and young the Judges totally ignored Coloured, and gave all the prizes to Silver-Grey, although there were birds of undoubted merit and very much larger in the pens of Coloured birds. In chickens the pen belonging to the Hon. H. W. Fitzwilliam, in my opinion, ought to have been first. As to the *Spanish* judging, I am at a loss to make out why the prizes were awarded, as in both adult and young the errors were so very glaring that one and all agreed the best pen in both classes was left unnoticed. In Partridge *Cochins*, Mr. Staunton was first with a pen marked extra superior by the Judges, Mr. R. W. Boyle being second. Mr. Zurhorst held his accustomed position of supremacy in White *Cochins*. Mr. Boyle won as usual in both classes for *Brahmas*. In *French* breeds, which have received such liberal support at this Show, the Hon. H. W. Fitzwilliam, Mr. C. F. Staunton, Mr. F. W. Pim, Mr. Cooper, and Col. Stuart Wortley won the chief prizes.

Mrs. Warburton and Mr. Cooper were awarded the majority of prizes in *Geese*, with first-rate birds. In ornamental water fowl and ornamental birds, the prizes went to Mr. Boyle and Mr. Williams.

Annexed is the prize list:—

DORKINGS (Coloured or Silver-Grey).—First and Second, Mrs. Warburton. Highly Commended, R. W. Boyle. *Chickens*.—First and Second, Mrs. Warburton. Highly Commended, Sir R. Paul, Bart.
SPANISH.—First, J. C. Cooper. Second, A. Comyns, jun. Highly Commended, R. P. Williams. *Chickens*.—First, S. Mowbray. Second, R. P. Williams.
GAME (Any variety).—First, C. F. Staunton. Second, R. Close.
COCHIN-CHINA (Brown or Partridge).—First, C. F. Staunton. Second, R. W. Boyle. Highly Commended, J. C. Cooper.
COCHIN-CHINA (White or Black).—First, F. W. Zurhorst. Second, G. Andrews.

COCHIN-CHINA (Any variety).—*Chickens*.—First, J. C. Cooper. Second, R. P. Williams. Highly Commended, Miss L. Warburton.
BRAMA POOTRA.—First, R. W. Boyle. Second, E. Wallace.
LA FLÈCHE.—First, C. F. Staunton. Second, Col. Stuart Wortley. Highly Commended, J. C. Cooper.
MALAY.—First and Second, J. C. Cooper.
CRÈVE CŒUR.—First, Hon. H. W. Fitzwilliam. Second, Col. Stuart Wortley. Highly Commended, J. C. Cooper.
HOUDAN.—First, F. W. Pim. Second, J. C. Cooper. Commended, Col. Stuart Wortley.
POLANDS.—Prize, J. C. Cooper.
HAMBURGS (Pencilled).—Prize, C. F. Staunton.
HAMBURGS (Spangled).—First, F. W. Zurhorst. Second, S. Mowbray. Highly Commended, F. W. Zurhorst.
BANTAMS.—First and Second, Mrs. Staunton.
ANY OTHER VARIETY.—First and Second, F. W. Zurhorst. Highly Commended, J. C. Cooper.
DUCKS (Rouen).—First, R. P. Williams. Second, J. C. Cooper.
DUCKS (Aylesbury).—First, R. P. Williams. Second, Hon. H. W. Fitzwilliam. Highly Commended, Miss A. Warburton. Commended, Mrs. Warburton.
GESE (White).—First, Mrs. Warburton. Second, J. C. Cooper. *Goosings*.—First and Second, Mrs. Warburton. Highly Commended, J. C. Cooper.
GESE (Grey).—First and Second, J. C. Cooper. *Goosings*.—First, S. Mowbray. Second, J. C. Cooper.
TURKEYS.—First, J. C. Cooper. Second, Mrs. Clementi. *Poult.*—Prize, J. C. Cooper.

SINGLE COCKS.

DORKING.—First, S. Mowbray. Second, Hon. H. W. Fitzwilliam.
SPANISH.—First, J. C. Cooper. Second, G. Andrews.
GAME.—First, R. Close. Second, J. C. Cooper.
COCHIN-CHINA.—First, A. Comyns. Second, R. W. Boyle.
BRAMA POOTRA.—First, R. W. Boyle. Second, Mrs. Warburton.
LA FLÈCHE.—First, Col. Stuart Wortley. Second, J. C. Cooper.
MALAY.—First and Second, J. C. Cooper.
CRÈVE CŒUR.—First, Col. Stuart Wortley. Second, F. W. Zurhorst.
HOUDAN.—First and Second, F. W. Pim.
POLAND.—Prize, J. C. Cooper.
HAMBURGH (Pencilled).—Prize, C. F. Staunton.
HAMBURGH (Spangled).—First, S. Mowbray. Second, F. W. Zurhorst.
BANTAM.—First, C. F. Staunton. Second, A. McGahey.

PIGEONS.

TUMBLERS (Any variety).—First, Master J. F. Blennerhasset, Rockfield, Kilpeacon, Limerick (Short-faced Black-mottled). Second, Master R. A. Blennerhasset, Rockfield, Kilpeacon, Limerick (Short-faced Bluebeards). Highly Commended, J. B. Blennerhasset, Rockfield, Kilpeacon, Limerick (Short-faced Yellow Bald).
FANTAILS.—First, J. H. McCrear, Altona, Foxrock, Co. Dublin. Second, R. Blennerhasset (White). Highly Commended, E. D. McCrear, jun. Commended, R. A. Blennerhasset (Blue and Black).
NEWS.—First, J. F. Blennerhasset, Rockfield, Co. F. Staunton. Highly Commended, C. J. Wallace, Belfield, Donnybrook, Co. Dublin (Black-headed).

ORNAMENTAL WATER FOWL.—Prize, R. W. Boyle (Bahama Ducks). Highly Commended, R. P. Williams, Glaslun, Clontarf, Co. Dublin (Ruddy Sholl Ducks).

ORNAMENTAL BIRDS NOT PREVIOUSLY MENTIONED.—Prize, R. P. Williams (Silver Pheasants). Highly Commended, R. P. Williams (Japan or Blue-shouldered Pea Fowl).

CRAVEN AGRICULTURAL SOCIETY'S POULTRY SHOW.

(From a Correspondent.)

THE Exhibition of the above Society took place in an extensive park at Skipton, on August 30th. Some excellent poultry and Pigeons were shown, and there was a good attendance of visitors. Among adult poultry the *Dorkings* were poor, but the *Spanish* and *Cochins* good; and the winning pens of *Game* were very fine. The first-prize Golden-pencilled *Hamburgh* cock was also very fine; but most of the other *Hamburghs*, though good in other respects, were not in good feather.

Among chickens the *Dorkings* were much better than the adult birds of the same breed, and the *Spanish* were but moderate. *Game* were poor, but the *Cochins* were all that could be desired. The first-prize Silver-pencilled *Hamburgh* pen contained a cockerel of extraordinary merit, shown by Mr. Beldon; but the Gold-spangled were bad, while the Silver-spangled were as good. The first-prize pen of Black *Hamburghs* was of extraordinary merit; and the *Polands* and first-prize pen of *Game Bantams* were also well worthy of their position. A perfect pen of Black Bantams was first in the variety class.

The *Geese* and *Ducks* were also large and in fine condition, and a very fine pen of Bahama Ducks took first for any other variety of Ducks.

Pigeons were good throughout if we except the *Owls*, and most of the Carriers were in bad feather. The Antwerp class was one of extraordinary merit and number, and some excellent birds were shown.

DORKINGS (Any colour).—First, H. Beldon, Bingley. Second, J. Hargreaves, Skipton. *Chickens*.—First, H. Beldon. Second, E. Leech, Rochdale. Highly Commended, J. Hargreaves.

SPANISH (Black).—First, J. Thresh, Bradford. Second, H. Beldon. *Chickens*.—First, J. Newton, Silsden. Second, H. Beldon. Highly Commended, J. W. Cannon, Bradford.

GAME.—First and Second, E. Ayrkroyd, Bradford. *Chickens*.—First, J. Carlisle, Earby. Second, T. M. Johnson, Eshton. Highly Commended, W. Roberts, Burnley.

COCHIN-CHINA.—First, H. Beldon. Second, C. Sidgwick, Keighley. *Chickens*.—First, R. Smith. Highly Commended, H. Beldon.

HAMBURGS (Golden-pencilled).—First, J. Dixon, Bradford. Second, H. Beldon. *Chickens*.—First, H. Pickles, jun., Earby. Second, J. Preston Bradford. Highly Commended, H. Beldon.

HAMBURGERS OR CHITTEPRATTS (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, jun. *Chickens*.—First, H. Beldon. Second, W. & J. Bairdow, Bingley. Highly Commended, W. Wilson, Rawtenstall; A. & C. Smith, Silsden.

HAMBURGERS (Golden-spangled).—First, H. Beldon. Second, J. Newton. *Chickens*.—First, W. Vickers, Otley. Second, W. Driver, Keighley. Highly Commended, H. Beldon.

HAMBURGERS (Silver-spangled).—First, H. Pickles, jun. Second, H. Beldon. Highly Commended, A. & C. Smith, Silsden; H. Pickles, jun. *Chickens*.—First, H. Pickles, jun. Second, J. Berry, Sutton. Highly Commended, H. Beldon; T. Fawcett, Baildon.

HAMBURGERS (Black).—First, H. Beldon. Second, W. Green, Keighley. *Chickens*.—First and Second, C. Sidgwick. Highly Commended, W. Green; H. Beldon.

POLANDS.—First and Second, H. Beldon. *Chickens*.—Prize, H. Beldon. **GAME BANTAMS**.—First, G. Noble. Second, J. Scott, Skipton. Highly Commended, G. Birtwhistle, Haslingden. *Chickens*.—First, G. Noble. Second, T. Hartley, Earby.

BANTAMS (Any colour).—Prize, T. Burgess. *Chickens*.—First, E. Hutton, Pudsey. Second, J. Rooking, Addingham. Highly Commended, E. Hutton. **ANY OTHER VARIETY**.—First, H. Beldon. Second, J. Hargreaves.

Chickens.—First, E. Leech. Second, H. Beldon. **GEESSE** (White).—First, E. Leech. Second and Highly Commended, B. Baxter, Skipton.

GEESSE (Grey Tonlense).—First, R. B. Clonler. Second, E. Leech. **DUCKS** (Aylesbury).—First and Second, E. Leech.

DUCKS (Romen).—First, E. Leech. Second, J. Dixon, Bradford. Highly Commended, E. Leech; C. Sidgwick.

ANY OTHER VARIETY.—First, H. Beldon. Second, J. Dixon. **TURKEYS**.—Prize, E. Leech.

PIGEONS.

CARRIER.—*Cock*.—First, H. Smith, Skipton. Second, J. Hawley. Highly Commended, J. Hawley. *Hen*.—First, H. Smith. Second, J. Hawley.

POUTER.—*Cock*.—First, H. Beldon. Second, J. Hawley. *Hen*.—First, J. Hawley. Second, H. Beldon. Highly Commended, J. Hawley.

TUMBLERS (Almond).—First, H. Beldon. Second, J. Hawley. **OWLS**.—First, J. Thompson. Second, A. & B. B. Laycock. Highly Commended, H. Smith.

BARBS.—First, J. Hawley. Second, H. Smith. Highly Commended, J. Thompson. **JACOBIANS**.—First and Second, J. Thompson. Highly Commended, H. Beldon.

TUMBLERS (Mottled).—First and Second, J. Hawley. **BALD PATES**.—First, A. & C. Smith. Second and Highly Commended, J. Hawley.

RUNTS.—First, H. Smith. Second, A. & B. B. Laycock. **FANTAILS**.—First, J. Hawley. Second, A. & C. Smith. Highly Commended, J. Thompson.

DRAGONS.—First, J. Thompson. Second, J. Lister. Highly Commended, J. Thompson; J. Collier, Skipton.

ANTWERPS.—First, J. Hawley. Second, E. Hutton, Pudsey. Extra Second, W. Lund, Shipley. Highly Commended, J. Thompson; A. G. Wilding, Burnley; J. Hawley; E. Hutton.

ANY OTHER VARIETY.—First, J. Thompson. Second, H. Beldon. Highly Commended, J. Thompson; J. Hawley; J. Lister.

JUDGES.—Mr. J. Heywood, Bow Lee, Middleton, Manchester; and Mr. Richard Tebbay, Fulwood, Preston.

BINGLEY POULTRY SHOW.

ALTHOUGH at the present time the number of poultry exhibitions held simultaneously, or nearly so, must necessarily do something to lessen the number of entries at each show, there is evidently so strong a tide in favour of these exhibitions, that good competitions in spite of all such drawbacks take place, and the number of visitors frequenting them certainly increases from time to time. This statement applies forcibly to the Bingley Show, as no doubt the knowledge that the specimens shown would be under the special care of persons themselves well known for their vigilance and good management in poultry matters gave increased confidence to many an anxious owner. The Show took place in Myrtle Park, a very suitable and picturesque spot; whilst the town of Bingley itself was from end to end in holiday attire. Flags and banners were everywhere abundant; whilst by the kind permission of—Farren, Esq., M.P., of The Grange, sufficient over-greens were cut from that gentleman's very extensive plantations to decorate the whole of the principal streets in Bingley.

The Show itself took place beneath the shelter of a very large and excellent tent, that had the day previously been used for the horticultural and floral fête. This caused, no doubt, the only mistake in the arrangements for the poultry Show that could be pointed out. The stands for large exhibition plants were sadly too low for the purposes of a poultry show; in fact, the pens should have been raised some 18 inches to 2 feet higher, and then the general appearance of the Show would have been wonderfully improved. Time, however, was pressing, the timbers used for the flower show remained unchanged, and hence arose this one shortcoming.

There was a good show of *Game* birds, and the *Spanish* class, though a small one, was first-rate. The *Dorking* class was the worst in the Show, and consequently only the third prize was awarded. The *Cockins* were few, but excellent; and the *Brahmas* were better than we anticipated. In *Polands*, of course, Mr. Beldon had it all his own way; but so excellent a collection is rarely to be seen at one time. Mr. Beldon's collection of *Hamburgs* was a great credit to this Meeting; and Mr. Sidgwick exhibited a pen of Black *Hamburg* chickens that were, indeed, most covetable specimens. Col. Stuart Wortley stood first in the extra class with *Circé Coeurs*, and the fowls seemed especially attractive to the public eye as a novelty to visitors not ac-

customed to new varieties. The Selling class, "not to exceed 20s the pen," was an extraordinarily good one. The two principal pens' Buff *Cochins* and *Spanish*, were certainly, either of them, worth thrice the money at which they were entered. Several other varieties in this class were nearly as much undervalued. The *Ducks* were very few in numbers, and neither *Geese* nor *Turkeys* were exhibited. For the latter two, no doubt, in future years prizes will be offered. The Committee were very painstaking in their care of both the poultry and Pigeons. The day being very fine indeed, there was no lack of visitors, and everything went off most satisfactorily.

GAME.—First, E. Aykroyd, Bradford. Second, J. Hodgson, Bradford. Third, W. Spencer, Haworth.

SPANISH.—First, W. Harvey, Sheffield. Second, J. Thresh, Bradford. Third, H. Beldon, Goitstock, Bingley.

DORKINGS.—First and Second, Withheld. Third, H. Beldon.

COCHINS.—First and Second, W. Harvey. Third, C. Sidgwick, Keighley.

PRAHMAS.—First, W. Harvey. Second, M. Scott, Cote, Idle, near Leeds.

Third, H. Beldon.

POLANDS.—First, Second, and Third, H. Beldon.

HAMBURGERS (Golden-pencilled).—First, H. Beldon. Second, J. Smith, Micklethwaite, near Bingley. Third, H. Pickles, Earby, near Skipton.

HAMBURGERS (Silver-pencilled).—First, A. Smith, Silsden. Second, W. and J. Bairdow, Fearncliffe, Bingley. Third, T. Kinder, Bingley.

HAMBURGERS (Golden-spangled).—First, A. Driver, Bingley. Second, H. Beldon. Third, J. White, Netherton, near Wakefield.

HAMBURGERS (Silver-spangled).—First, H. Beldon. Second, H. Pickles, jun. Third, E. Gill, Bingley.

HAMBURGERS (Black).—First, W. Green, Keighley. Second and Third, C. Sidgwick.

GAME BANTAMS.—First, W. F. Entwistle, Leeds. Second, W. Greaves, Allerton, near Bradford. Third, E. Brough, Leek.

BANTAMS (Any other breed).—First, T. Burgess, Brighouse. Second, W. Harvey. Third, T. Amphlett, Walsall.

ANY OTHER BREED.—First, Col. Stuart Wortley, Grove End Road, London. Second, M. Abbott, Wharfedale.

SELLING CLASS.—First, B. W. Illingworth, Idle. Second, J. Baron, Silsden. Third, H. Beldon.

DUCKS (Any variety).—First, C. Sidgwick. Second, T. Dean, Keighley. Third, H. Beldon.

PIGEONS.

The *Pigeons* were generally of first-class quality. In *Pouter* cocks a splendid bird of F. Crossley, Esq., was first. The same gentleman took the same place in the *hen* class. Mr. Harvey was third with a very good *White*, which ought to have been higher in the list. In *Carriers* Mr. Crossley was again first in the class for cocks; in *hens* (*Carrier*), E. E. M. Roys, Esq., was first, and took the cup for the best pen with a splendid *Dun* hen. In the class for *Tumblers* Mr. F. Key was first with a pair of *Almonds*, Mr. J. Hawley being second with a very good pair of *Black Nettles*. *Barbs* were of fair quality. *Jacobins* were a poor class. In *Owls* Mr. Fielding was first with a good pen of *Blues*. *Trumpeters* were a fair class, especially the first-prize pair. *Fantails* were good. In *Turbits* Messrs Hattersley & Wilson were first with a good pair of *Blues*. *Dragons* and *Antwerps* were of good quality, the competition being keen. In the *Variety* class, perhaps, Mr. Yardley's *Maned Pigeons* ought to have been first. The Secretary showed some good birds (not for competition), comprising some excellent *Jacobins*, *Trumpeters*, *Turbits*, *Nuns*, *Owls*, &c.

POUTER.—*Cock*.—First, F. Crossley, Elland. Second, E. E. M. Roys, Greenhill, Rochdale. Third, J. E. Breward, Coventry. *Hen*.—First, F. Crossley. Second, E. E. M. Roys. Third, W. Harvey. Highly Commended, A. H. Stewart, Harborne, near Birmingham; J. Hawley, Bingley.

CARRIER.—*Cock*.—First, F. Crossley. Second, H. Yardley, Birmingham. Third, J. Hawley. Commended, E. E. M. Roys; J. Muir, Glasgow. *Hen*.—First, Cup, and Third, E. E. M. Roys. Second, F. Crossley. Commended, J. Hawley.

TUMBLERS.—First, F. Key, Beverley. Second and Third, J. Hawley, Commended, J. Hawley; F. Crossley.

BARBS.—First, F. Crossley. Second, J. Hawley. Third, H. Yardley. **JACOBIANS**.—First, H. Yardley. Second, J. Muir. Third, A. H. Stewart, Birmingham.

OWLS.—First, J. Fielding, jun., Rochdale. Second, F. Crossley. Third, A. & B. B. Laycock, Keighley.

TRUMPETERS.—First and Third, J. Hawley. Second, C. Dunlop, Bingley. **FANTAILS**.—First, H. Yardley. Second, J. Hawley. Third, J. Lister, Keighley. Commended, A. Parry, Rochdale; J. Muir.

TURBITS.—First, Messrs. Hattersley & Wilson, Thirsk. Second, R. F. Payling, Peterborough. Third, A. H. Stewart. Commended, H. W. Illingworth; J. Booth, Allerton.

DRAGONS.—First, F. Crossley. Second, W. Harvey. Third, H. Yardley. **ANTWERPS**.—First, J. Hawley. Second, W. Lund, Shipley. Third, H. W. Illingworth.

ANY OTHER VARIETY.—First, J. Hawley. Second, H. Yardley. Third, A. H. Stewart (German Toys). Highly Commended, W. Harvey. Commended, H. Yardley; F. Broemel, Lewisham (Trouts).

SELLING CLASS.—First, J. Hawley. Second, A. & B. B. Laycock. Third, A. H. Stewart (Blue Fantails). Highly Commended, J. E. Breward (White Pouters); T. Burgess.

CANARIES.

BELGIAN (Yellow).—First, J. Cockshott, Bingley. Second, J. Hollings, Bingley. Third, S. Fieldhouse, Baildon.

BELGIAN (Buff).—First, A. Vailhank, Bingley. Second, W. Addison, Ripon. Third, J. Sharp, Baildon.

NORWICH (Yellow).—First, Cup, and Second, J. Baines, York. Third, W. Addison.

NORWICH (Buff).—First, C. Burton, York. Second, J. Baines. Third, H. Cockshott.

MARKED YELLOW.—First, J. Coward, Baildon. Second, I. Wildman, Bingley. Third, W. Addison.

MARKED BUFF.—First, I. Wildman. Second, J. Cockshott. Third, J. Ellis, Baildon.

MULE (Yellow).—First, T. Newall, Baildon. Second, B. Dalton, Bingley.
MULE (Buff).—First, B. Dalton. Second, A. Walbank. Third, C. Burton, York.

ANY OTHER VARIETY (Silver-plated Cap for the best Canary bird).—First and Second, J. Cockshott. Third, C. Burton, York.

Mr. Cannan, of Bradford, and Mr. Hewitt, of Birmingham, were the Judges.

WHITBY POULTRY SHOW.

(From a Correspondent.)

To those whose avocations compel them to dwell in smoky, stifling, inland towns, it is a delightful relief to spend a few days at the seaside, especially in this almost tropical weather, and there are few places which offer greater facilities for relaxation and renewal of health to the overworked student, or jaded man of business, than the pleasant watering place of Whitby.

The Whitby Agricultural Society, following in the wake of the Royal and other large Societies, offered this year additional and more liberal prizes for poultry. The result has been an enormous increase in the number of entries. The Show mustered in poultry and Pigeons 358 pens, a great proportion of which had been sent from a considerable distance. The arrangements for the comfort of the fowls were all that could be desired. Turner's pens were used, and they were surmounted by a canvas awning, which, whilst affording ample protection from sun or shower, offered no obstruction to the light, and the birds were all seen to the best advantage.

Foremost amongst the noteworthy birds was a very fine Numidian Crane (*Ardea cinerea*), a beautifully-shaped and graceful bird. Col. Stuart Wortley exhibited a pen of *La Pêche* and a pen of *Houdans* of the highest excellence. A pen of *Malays*, a pen of *Houdans*, and a pen of Aylesbury Ducks, exhibited by the Rev. Mr. Hustler, York, were all of good quality. Mr. Nicholson's Game birds, Mr. Tom Brown's Geese, and Mr. Farrand's Aylesbury Ducks were also of superior merit. There were some very good Spanish, Houdan, and Dark Brahma chickens exhibited by Mr. Stonehouse, of Whitby. *Dorkings* occupied the place of honour in the schedule. There were very full classes, and some very good birds both adults and chickens. In *Spanish*, the old birds were not worthy of much commendation, but there were some very good chickens. In the *Game* class, cock and hen, there were twenty entries, and sixteen for the cockerel and pullet class. Some of the birds were very good. The first prize was won by a Black-breasted cock. *Cochins* were numerous, and some of the birds had attained great size, but they were not remarkable for the possession of other good points. In *Brahma Pootras* there were twelve entries, most of the birds were suffering from the moult. The first-prize bird was long in the legs and neck, had vulture hocks, and a large ill-defined comb, and the hackle of the second-prize cock was more of a golden than a silver colour. *Ham-burghs* were in great force. In the four classes, altogether there were more than fifty entries. The Golden-spangled class was exceedingly good. Mr. H. Pickles carried off three first prizes in these classes. For *Game Bantams* there were twenty-six entries.

Ducks, Geese, and Turkeys were of good quality. The *Pigeons* were also fully up to the average.

The following are the awards:—

DORKING.—First, J. White, Warlaby. Second, G. Pounder, Kirbymoorside. Highly Commended, J. Walker, Knaresborough. Commended, R. Smith. *Chickens.*—First, J. White. Second, Rev. G. Hustler, Stillingfleet, York. Highly Commended, G. Pounder. Commended, O. A. Young, Driffield.

SPANISH.—First, G. Holmes, Driffield. Second, J. Nicholson, Scarborough. *Chickens.*—First, M. Farrand, Dalton. Second, W. Stonehouse, Whitby. Commended, W. Stonehouse.

GAME.—First, J. Nicholson. Second, Rev. T. Phillips. Highly Commended, R. Smith; G. Pounder. *Chickens.*—First, W. Bearpark, Ainderby Steeple. Second, G. Pounder. Highly Commended, T. Brown, Pickering. Commended, G. B. Bell, Darlington.

COCHIN-CHINA (Any colour).—First, T. H. Barker, Hovingham. Second, J. Walker. Highly Commended, R. Smith; T. H. Barker; G. Calvert, Darlington. Commended, G. Pounder.

BRAHMA POOTRA (Any colour).—First, W. Whiteley, Sheffield. Second, G. Pounder. Third, W. Stonehouse. Highly Commended, G. Calvert.

HAMBURGH (Golden-spangled).—First, G. Holmes. Second, O. A. Young. Highly Commended, J. Thistlethwaite, Gt. Ayton; H. Pickles, jun. Enby. Commended, T. H. Read.

HAMBURGH (Silver-spangled).—First, H. Pickles, jun. Second, O. A. Young. Highly Commended, J. Walker.

HAMBURGH (Golden-pencilled).—First, H. Pickles. Second, G. Holmes. Highly Commended, J. Walker. Commended, W. Bearpark.

HAMBURGH (Silver-pencilled).—First, H. Pickles. Second, J. Walker. Highly Commended, G. Holmes.

GAME BANTAM (Any colour).—First, W. F. Entwistle, Leeds. Second and Third, R. Smith. Commended, R. Horstler.

BANTAMS (Any other variety).—First, O. A. Young. Second, W. Baynes, Middleton. Third, R. Smith.

ANY OTHER VARIETY NOT BEFORE MENTIONED.—First and Third, Rev. G. Hustler. Second, Col. Wortley, London. Highly Commended, W. Stonehouse; Rev. J. G. Milner. Commended, I. Bolton; T. Brown. *Chickens.*—First, Col. Wortley. Second, S. A. Burrows. Third, J. Brains. Highly Commended, W. Wardell, Pickering. Commended, W. Stonehouse; J. Brains; W. Dowland, Burnistow; J. Denham, Malton.

DUCKS (Aylesbury).—First, M. Farrand. Second, O. A. Young. *Ducklings.*—First, Rev. G. Hustler. Second, J. Brains, jun.

DUCKS (Rouen).—First, J. Brains, jun. Second, M. L. Simpson. *Ducklings.*—First, W. Dowson, Eskdaleside. Second, J. Brains. Highly Commended, W. Bearpark.

DUCKS (Any other variety).—First and Second, Rev. J. G. Milner.

GESE.—First, T. Brown. Second, O. A. Young. Highly Commended, J. Wilkinson. *Goslings.*—First, O. A. Young. Second, Hattersley and Wilson. Highly Commended, Mrs. W. Ward; Rev. G. Hustler; J. Wilkinson. Commended, H. Dowland, Ruston.

TURKEYS.—First, G. Hindson, Dromouby. Second, H. Merkin, Driffield. Highly Commended, Rev. G. Hustler. Commended, Mrs. T. Ward. *Poult.*—First, Mrs. T. Ward. Second, O. A. Young.

EXTRA STOCK.—Highly Commended, Mrs. Turnbull.

PIGEONS.

CROPPERS.—First, Hattersley & Wilson. Second, H. Simpson, jun.

TUMBLERS.—First, Hattersley & Wilson. Second, G. Readman, Castleton.

CARRIERS.—First, Hattersley & Wilson. Second, G. W. Sanders.

FANTAILS.—First, F. B. Lockwood. Second, W. Rudsdale.

JACOBINS.—First, H. Simpson, jun. Second, W. Rudsdale.

TRUMPETERS.—First, H. Simpson, jun. Second, Hattersley & Wilson.

RAMPS.—First, H. Simpson, jun. Second, W. Rudsdale.

ANY OTHER VARIETY.—First, Hattersley & Wilson. Second, W. Rudsdale.

JUNCES.—Mr. Harry Adams, Beverley; Mr. Sammel Burn, Whitby; and Rev. T. Phillips, Robin Hood's Bay.

MANCHESTER AND LIVERPOOL POULTRY SHOW.

This year's meeting appeared to excite a greater amount of public interest than any in previous years, from the simple fact that the Manchester and Liverpool Society's Shows have now been annually held for one hundred years. Of course poultry has only formed a portion of the Exhibition during the last fifteen or twenty years; but the fact was well recognised by all, that this department of the Show-yard is always the most popular and well-filled of any; and since the restrictions necessarily imposed on the exhibition of horned cattle through the cattle plague, poultry seems to have been productive of great pecuniary help to agricultural societies generally. In the present case both the poultry and Pigeons were exceedingly good, and the space allotted to them was constantly filled with amateurs and general visitors. A rule, unfortunately laid down by the Committee, that each exhibitor was compelled to send some party in trust of his birds, told seriously against the number of entries, and caused the competition in some of the classes to prove meagre in the extreme. It was universally acknowledged to be a great mistake in this year's regulations, and we were glad to find that at future meetings this obnoxious rule will be cancelled. The birds shown were, as a rule, of the highest excellence, and the arrangements on the ground deserve most favourable mention.

The *Spanish* fowls were particularly good, and the same may be said of the *Cochins*. Mr. Taylor's pen of the last-named variety was exceedingly well shown. We cannot possibly speak more highly than they deserved of Mr. Boyle's pens of *Brahmas*. They were the most heavily feathered we have seen for many years past, yet without the slightest trace or even suspicion of "Falcon-hock," and the matching of the pens was perfection itself. The colour and markings were also equally excellent. Mr. Charles Challoner showed one of the very best pens of Black Red *Game* chickens yet seen this season, and Mr. Wood competed with excellent pens also, but their being so much overtaxed by frequent exhibition told sadly against the last-named fowls. *Ham-burghs* were quite a feature of the Show. Mr. Beldon's Silver-pencilled have rarely been equalled of late years, in fact, never since Mr. Archer, of Malvern, ceased to exhibit them. The Golden and Silver-spangled were scarcely less worthy of praise. Col. Stuart Wortley stood first, as usual, in the new varieties of French fowls. *Ducks, Geese, and Turkeys* were especially good.

The Show was arranged for birds of 1867 only; but we regret to say that a number of pens containing old birds were exhibited, and necessarily "disqualified." We say for the twentieth time exhibitors cannot possibly pay too great attention to the perusal of each particular prize schedule before making their entries, for rules must be complied with.

The *Pigeons* were almost without exception of the highest order; a pen of Blue Pouters were greatly admired. In *Carriers* there is only very rarely to be found so good a competition. Among the Toys were several breeds that proved most attractive, as being not only shown in the most exquisite condition and feather, but some pens contained such varieties as have not been seen at previous shows.

The weather proving favourable the number of visitors was most extraordinary, and the refreshment department being under the special arrangement of the Messrs. Jennison, of Belle Vue, was carried out in the most efficient, orderly, and satisfactory manner.

The Judges for Poultry were Messrs. Hewitt, Hindson, Teebay, and Smith. For *Pigeons*: Messrs. Smith and Esquilant. We gave the prize list in last week's issue.

LIGHT BRAHMA POOTRAS.—In the Birmingham prize list of this year will be found two silver cups (£5 each), for this breed; one given by our celebrated exhibitor Mr. Pares, and the other to be given by subscriptions, towards which Mr. Pigeon gives £1, and I give £1. I trust that others will write to Mr. Pares, Postford, Guildford, and subscribe £1 each. If more than the requisite amount be obtained, a third cup will be given.—ALBERT O. WORTHINGTON.

LIGURIANISING AN APIARY.

THERE is one point which I think is omitted in Mr. Woodbury's article on the subject of propagating Ligurians, which appeared in "Our Journal" of 11th of April last, and which I think important. It is not stated how the young queens are to be introduced to the other hives, or what is to be done with the nuclei when they have answered their purpose. I should suppose the former must be done in a similar manner to that recommended in "Bee-keeping for the Many," and the latter would, perhaps, be placed in such positions as would be suitable for joining them to the nearest stocks afterwards. Or, would it be better to remove the old queen and then drive the Ligurian queens and bees out of the nuclei, and add them to the queenless stocks in that style? or to place the nuclei upon the top of the queenless stocks? I should fancy that in frame hives it would be a good plan to remove the old queen and give them a couple of queen cells from the Ligurians; but certainly the safer plan is to keep them in the nuclei until there is evidence of the queen's impregnation. I am very much inconvenienced for want of some worker-comb, being a beginner; and some of the rebels in one of my artificial swarms have made little else but drone-comb. However, the queen has commenced laying in the worker-comb, so I have taken two of these drone-combs, with honey in, to place on each side of my Ligurian brood-comb in the nucleus.

I added a swarm of black bees to the stock in which I placed the Ligurian queen about a fortnight after I had received her, as I thought it would materially strengthen the swarm, and aid her majesty in accomplishing the desired revolution.—J. R. J.

[No queen should be removed from the nucleus in which she has been hatched until she has commenced egg-laying, when she may be placed at the head of another stock. And here I may at once confess that I know of no means by which the substitution of queens can be effected without some risk of a mishap. After all my practice, and I have had not a little, I have failed twice during this present season, and I can therefore do no more than describe the process by which the degree of risk seems reduced to a minimum, without attempting to guarantee success in all cases. My instructions in the first instance apply only to moveable-comb hives, the combs of which must be lifted out and looked over until the queen be discovered. She should then be imprisoned in a small but well ventilated box with a few score of her workers and a piece of sealed honeycomb, and put by in some quiet, dark, and cool place as a *dernier resort* in case of failure. Four or five days after her deposition the combs must be again carefully examined, and all royal cells excised. It will, indeed, be better at this time to shake nearly all the bees off from each comb in succession, in order to make sure that no royal embryo escapes observation. Extinction of the recent dynasty having thus been completely effected, at any rate for the time being, the new pretender to the vacant throne must be first introduced to her intended subjects under the protection of a wire cage,* which having been secured between two of the brood-combs, the hive should be closed and left undisturbed for a couple of days, when the cluster of bees surrounding the royal prisoner should be critically examined, and her liberation or continued incarceration determined on in accordance with their demeanour. If this cluster assumes the appearance of a dense knot of workers intertwined and clinging closely together with all the strength and energy of which they are capable, and momentarily increases its dimensions by the accession of numbers of bees which rush towards it from all parts of the adjacent combs, the regicidal frenzy continues in full force and its hapless object must still remain within her prison-bars, in order to be protected from the fury of the raging multitude without. If, on the other hand, the bees which surround her cage are so few in number as to permit a view of the movements of the royal prisoner and her companions in captivity, whilst none cling, "like grim death," with curved and threatening abdomens against the wires of the cage, but rather assume the quiet and respectfully attentive appearance which marks the ordinary deportment of workers in the presence of their acknowledged sovereign, the imprisoned queen may be at once released with every prospect of success, and if she be allowed to traverse the comb for a few seconds in view of the bee-keeper, he will be enabled to judge of the character of her

reception. Should she obtain the respectful homage proper to the royal progress of a liege sovereign amongst her loyal subjects, the hive may at once be closed with every hope of a successful issue, but if she be seized and detained she must again be restored to the protection of her prison, there to await the return of her rebellious subjects to a more dutiful frame of mind. There are of course almost infinite gradations and degrees of difference between the dense knot of would-be regicides which I have first described and the comparatively few watchful attendants who wait with respectful patience to welcome their future sovereign on her release from captivity, and it requires some practice to enable the bee-keeper to determine when it is best to release an imprisoned queen, since, if she be left too long incarcerated, the outsiders seem at length to come to regard her with indifference, and she ultimately perishes either from lack of food or from the effects of her unnatural and constrained position.

In operating upon hives with fixed combs, I prefer effecting a complete eviction of the inhabitants, which should be expelled by driving, and then established as an artificial swarm in a moveable comb-hive on their old stance, whilst the occupants of the nucleus-box are inducted into their ready-furnished dwelling. As it is most probable that the incoming tenants will be comparatively few in number, and that they will, therefore, find themselves over-housed, whilst the brood left by their predecessors would in this case run great risk of becoming chilled and, therefore, abortive, it is well during the first week or so to shut up the bees every evening by means of perforated zinc, and place them in a warm room (say the kitchen), for the night. When the hive becomes moderately populous, this practice may, of course, be discontinued.

As soon as another young Italian queen is ready, and the artificial swarm has pretty nearly filled its hive with combs, it may be Italianised by an exchange of queens in the manner first described.

The various nuclei having answered their purpose by furnishing Ligurian queens for other hives, should towards the end of the season have queens raised within them for the last time, and these having become fecundated, every nucleus should be built up into a good stock by the gradual and careful addition of ripe brood-combs taken from other colonies, being also transferred during the process into a full-sized hive, and fed up to a sufficient weight to stand the winter.

This, then, is the complete programme for Italianising an apiary. Many of the young queens thus raised will, doubtless, be crossed by black drones; but even these will, as I have previously stated in these pages, certainly breed pure drones in the following spring, when they may in their turn be weeded out and replaced by queens of the current year, which will then have a much better chance of true Italian impregnation. It will be perceived that I have avoided all unions of adult bees, which a very considerable amount of experience has satisfied me, can in no way be effected without risking the life of the queen. "J. R. J." it appears tried the experiment and was successful. I congratulate him upon his success, but, all the same, I should have been afraid to risk it.

Whilst confessing, therefore, that I know of no mode of uniting adult bees which is free from the chance of an occasional failure, I purpose taking an early opportunity of describing the process of effecting antinatal unions, by which that danger appears recently to have been reduced to a minimum by—A DEVONSHIRE BEE-KEEPER.

P.S.—The rebels who made drone-combs in one of "J. R. J.'s" artificial swarms, did so, doubtless, in consequence of these combs being built before a queen had been hatched out. This argues a mistake on the part of the apiarian, for no large artificial swarm should ever be made without a queen. Swarms that have to raise queens should be furnished with combs, and consist of but comparatively few bees.]

OUR LETTER BOX.

MANCHESTER AND LIVERPOOL POULTRY SHOW.—"Mr. P. Taylor, of Manchester, won the first prize for single Buff Cochin cockerel, and net Mr. Dawes (as stated in your report), as that gentleman's pen was empty. Mr. P. Taylor's first prize pen of Buffs was claimed at the sum of £25 by Mr. Brierley, of Middleton, on the last day of the show.—X. Y. Z."

GALE'S HIVES (C. A. J.).—We hope to give more information concerning them very shortly.

CHEAP LIGURIAN QUEENS (*Queritor*).—I have some queens of the character you describe, which cost but 5s. each.—T. W. WOODBURY, Mount Radford, Exeter.

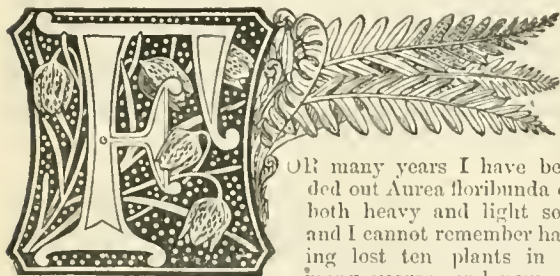
* A wire page-cover, pressed into the surface of a comb in the manner described by Kleine, may be used for this purpose, and it is well to imprison two or three of her own workers with the alien queen.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	SEPTEMBER 12—18, 1887.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
12	TH	Crystal Palace Autumn Show closes.	69.2	44.6	56.9	15	31	af 5	22	af 6	48	af 5	33	af 3	14	3 43	255
13	F	Bury St. Edmunds Horticultural Show.	68.2	45.7	57.1	18	33	5	20	6	15	6	39	4	15	4 3	256
14	S	Royal Horticultural Society, Premenade.	67.1	46.2	56.7	20	34	5	17	6	41	6	47	5	O	4 24	257
15	SUN	13 SUNDAY AFTER TRINITY.	67.6	46.3	56.9	20	35	5	15	6	7	7	57	6	17	4 45	258
16	M	[and General Meeting.	68.5	47.3	57.9	16	37	5	13	6	34	7	7	8	18	5 6	259
17	TU	Royal Horticultural Society, Fruit, Floral.	69.2	45.0	57.1	15	39	5	10	6	5	8	18	9	19	5 28	260
18	W	Warwickshire Horticultural Show closes.	68.3	46.4	57.2	18	40	5	8	6	49	8	33	10	20	5 19	261

From observations taken near London during the last forty years, the average day temperature of the week is 68.3°; and its night temperature 45.9°. The greatest heat was 88°, on the 13th, 1853; and the lowest cold 28°, on the 12th, 1853. The greatest fall of rain was 1.42 inch.

CULTURE OF THE YELLOW CALCEOLARIA



FOR many years I have bedded out *Aurea floribunda* on both heavy and light soil, and I cannot remember having lost ten plants in as many years; and now, as

some correspondents mention that the plant is likely to be no longer depended upon for flower-garden decoration, I will state the treatment that I have pursued for many years, and although there is nothing new in it, yet my *Calceolaria*-beds are about the best in bloom that I have this year.

In the first place, I never think of putting in my *Calceolaria* cuttings until the last week in September or the first week in October. Here, I think, many people commit an error. I have seen them put in to strike in the month of August, and in heat, where they are sure to die off. I have also known them inserted in a cold frame to strike and to winter in, which I think is an error; for in frosty weather in a cold frame they are covered up so long from the light that they often become drawn and sickly.

I remember once calling on a gardener in the month of January, and he asked me to look at his *Calceolarias*. We went to the kitchen garden, and he took a fork to turn over a manure-heap, as I thought; but after a good bit of vigorous labour he came at a two-light frame, which took some pulling and trying before he could lift the lights up a little so that I could take a look in, and here, sure enough, he had the frame full of yellow *Calceolarias*, planted in the natural soil about from 2 to 3 inches apart. I made no remark about their looks, but I went away with the impression that these *Calceolarias* had the yellow jaundice. At planting out time some of my neighbours had a few of these very plants, and most of them died off before the summer was over, and these are the only ones that I have seen die off.

About the last week in September I have the plants put into six and seven-inch pots, and placed in a cold frame, where they are kept close by day, and the lights pulled off at night, if calm weather, so that the night dews refresh them; but if the weather is so that the lights have to remain on during the night, then I give them a sprinkling overhead in the morning with cold water through a fine-rosed water-pot. I have struck *Calceolaria* cuttings as late as November; but at whatever time they are put in, I am careful to strike the whole stock for next year's supply. No spring-struck *Calceolarias* for me.

When well rooted I store them away either in a cold greenhouse, or a cold pit near the light, where frost is just kept out throughout the winter, and here I give them plenty of water. In fact, I never allow the plants to be-

come dry or flag from the day they are put in as cuttings to the day that they are planted out, and not then.

About the beginning of February I pot them off in 48-sized pots, using loam and sand, but no other addition. Leaf mould I dislike above all other soils.

After potting I keep them close for about twelve or fourteen days until the roots take hold of the soil, when the plants are gradually used to more air, and kept cold and moist until planting-out time.

The *Calceolaria* will grow very fast through April and May, and here I think some people commit an error by not stopping them sufficiently. I like to stop them as soon as I can get at the points of the shoots with my finger and thumb, and keep them stopped at every second joint. There is a great difference between stopping a plant and cutting it back.

By planting-out time I have fine, dwarf, bushy, vigorous plants, such as the west winds will not take much effect upon after they are put out in the beds. In planting I am particular to take out the crocks, and press the ball of the plant sufficiently between my hands so as to loosen the roots a little. When planted I give a good watering, and there is no more trouble with the plants.

There is one more recommendation I wish to make—be sure to keep down the green fly; but if the plants are properly managed there will be no green fly on them. I always conclude when I see them smothered with green fly that the plants had been kept too dry at the roots or in the atmosphere.—ROBIN ROVE.

ROSES.

I AM not a "rosarian"—very few of us are, I calculate, in the way our friend Mr. Radclyffe is—but I am an enthusiastic lover of England's flower, and as one of my family remarked to a friend the other day, when asked if I grew such a flower, "No! he only goes in for Roses!"

Now, although this is not strictly truth, as I fancy I can grow an Aster or two, yet I must allow that in my small way I do "go in" for Roses. Naturally, then, I read all that "our Journal" says on the subject, and perhaps might have written ere this on the topic, but that I thought it somewhat presumptuous in so juvenile a Rose-grower (not rosarian, remark); thus the thoughts have occasionally been penned, and then found their way to my wastepaper basket, instead of "our Editors'"; possibly this may reverse that decision, and find its way to theirs instead of mine! Be it so. Who can question the edict that is passed by those enthroned at 171, Fleet Street?

Most Rose-growers will agree with the remarks of "D. Deal." To him in the matter of Roses we are deeply indebted, and all he has said about *Maréchal Niel*, and much said by others lends me more and more to the idea that it is impossible for persons differently situated properly to estimate the value of a given Rose. *Maréchal Niel* must be a useful Rose, if only once in a way it gives a bloom such as I saw exhibited at Warminster Rose Show. That bloom, Mr. Keynes said, was worth a sovereign; and to a Rose lover it was worth something merely

to look at such a bloom, yet the grower told me it had already been out in bloom a fortnight! This, then, is a useful quality. I do not myself gather that it is hardy, for last winter took stock plants of mine, and destroyed every bud also; still this may be improved, and all horticulturists will hope that such a concentration of several winters in one may not occur again for some years. Again in "our Journal" of the 29th the hint of budding it on Gloire de Dijon may prove useful to every Rose-grower.

There can be no question that the different opinions formed by growers of the same Rose, as to its merits, depend on circumstances, possibly beyond our control. Certain Roses decline to open in certain situations; therefore, A discards it, B meanwhile lauds it to the skies. I have frequently noticed this in our columns—Roses mentioned as splendid, &c., yet which I can do nothing with. Madame Julie Daran, for instance, no sooner opens with me, than straightway the petals appear to burn up; this is alike on Manetti and Briar. America I have seen grown by Mr. Keynes surpassingly beautiful. I have never had a bloom open on the Briar till this year; but one this year was worth waiting for. I have budded it on the Manetti, I trust it may do better there, for I am loth to discard it. Impératrice Eugénie, again, will never open with me in the early summer. This, too, is on the Briar. I am going to try this on Manetti, for although Mrs. Y. B. A. Z. when I do bring her a bloom merely says, "Yes, pretty well for an improved monthly!" I myself like the Rose much. Turenne, again (that I well recollect seeing in "our" pages, noticed as only worthy of being in the largest collections), is one I must retain, if I confined myself to two dozen. It is a most glorious Rose, grown on the Manetti. Eugène Appert, "D., Deal," justly calls ragged, yet under certain conditions I have seen splendid blooms to which the epithet could not have been applied. Again, "D., Deal," evidently praises Madame Clemence Joigneaux, and it certainly is a magnificent Rose. I have grown it myself this year 5½ inches across, but I fancy it, if anything, coarser than Victor Verdier, at least with me.

On the merits of the Briar v. Manetti, I hardly like to speak after Mr. Cant's note, yet I should have given my verdict fifty times over in favour of the latter. The summer Roses, Gloire de Dijon, the Teas generally, make plenty of wood with me on the Briar, but few others grow vigorously; Eugène Appert, Madame Boll, and Comtesse C. de Chabillant, I must except, but the difference in vigour with me is most marked. I have so far discarded the Briar, that I do not expect to plant any more. In my neighbourhood some of the nursery gardeners use and value the old Duc de Cazes as a stock, using it in the same way as the Manetti.

I have found the Manetti throw up more suckers than I expected. This may be "Friday's" fault, possibly he disbuds the cuttings with a bad grace, for he "can't see what measter do want wif so many Roses, the gearden be vull on 'em." I have never been able satisfactorily to bud on the Manetti underground, as I believe all our Rose-growers do. This, I dare say, is all my own stupidity, but the bud from some cause or another rots. This is not of so much importance now that experience has shown that the Manetti does well for half standards. My own plan is this—I give it for the benefit of those who intend to try the Manetti stock, I warrant they will find it no easy work at first to bud underground. One's fingers appear to be all thumbs. In the first place, I like to make my stocks clear of shoots for 6 or 8 inches above ground. "Friday" plants them very shallow, just hiding the root. I bud just on the surface of the ground; if flush of buds I put in two, one just above the other, on opposite sides of the stem. The following autumn when the plant is placed in its regular position, the junction is buried some 2 inches.

As regards the suckers, I should say with the Briar this is the rule, with Manetti stocks it is the exception. At least, this is my experience. Is it a reason why with me the vigour of the plants budded on Manetti is so much greater? If I take up a Briar-budded Rose there is apparently an immense root, on examination it is soon proved that the root is chiefly made up of suckers that have been stopped as they appeared above the surface, whilst the true root fibres are very insignificant, and always fill me with astonishment as to their power to support any good growth in the tree. On the contrary, a plant of Manetti taken up is full of root fibres, requiring generally a very free use of the knife before replanting. If we are to have such winters as the last three Manetti must go to the top of the poll very quickly, for the Roses are for all practical purposes on their own roots. Indeed, it was shown by one writer

in "our" pages, many many months ago, that a large proportion of the Roses budded underground on the Manetti ultimately became "independent" members, and could throw off any allegiance to their foster parent.

There is, again, another advantage the Manetti has over the Briar—that is, that the wood will run (at least here), much later than the Briar.

As regards my budded plants of Manetti, I am somewhat in trouble, and I shall feel very grateful to Mr. Radclyffe if he would kindly give me his advice. By far the larger number of the buds I have put in have already started. Some are well out of harm's way, as they have flowered, or will do so before the wintry winds overtake them. Many, however, I fear will not be so fortunate. Now, with the earlier buds I have cut away the head of the Manetti to make it grow as vigorously as I could, as also to let in air and light to harden as much as possible the young wood of the bud. But how had I better act with those that have started—say since the 20th of August, and what steps had I better take to save them from winter's cold? I have thought of light litter, retained by fir branches, also hoeing up the earth round the stems so as to have the junction well covered by soil. Would this plan answer?

Does Mr. Radclyffe think that a Manetti well budded with a healthy-looking dormant bud is injured in its prospects of life by removal in autumn or winter?—Y. B. A. Z.

FRENCH AND ENGLISH GARDENING.

I HAVE read with some attention the letters of the Paris correspondent and "A London Market Gardener" in the *Times*. As usual there is some truth on both sides, but, as it seems to me, neither of them has made the subject very plain; for what can the greater part of the *Times* readers know of "cordon" training, about which the Paris contributor is so enthusiastic? He is evidently a young gardener who has seen but few of the fruit gardens belonging to amateurs of horticulture in England, and he is now on his first visit to the Continent; consequently he is warm in his admiration of the fantastic, but, in some instances, pretty modes of training fruit trees practised by French amateurs and by some of the French gardeners. It is to be regretted that this exercise of fancy too often fails to produce fruit (which, as I take it, should be the duty of a sober-minded fruit tree), so that a tree is often pointed out to the visitor as perfection in its training, yet quite bare of fruit. These fancy trees are often "spiral cordons," "palmettes," "diagonal cordons," &c. My memory fails me in endeavouring to recall the names I have heard applied to the various modes of training trees in France during my experience of some thirty or forty years; for I must acknowledge that I am an old fruit-cultivator, and have during my pilgrimage travelled much in France, Belgium, and Germany, and from my taste being that way inclined, I have been a close observer of the gardens of the Continent. I remember particularly well how much I resembled the Paris correspondent, when a young traveller, in my enthusiasm for all that I saw new (and which I then thought rich and rare), in horticulture. The different fashions of training trees in France have always afforded me much amusement. It is true they have not been quite so fleeting as the fashion of a bonnet, but they have flourished for a time and have then passed away. The cordon training, now so much written about, is a very old English system, and may be found in perfection in the gardens of the Royal Horticultural Society at Chiswick, where some fine Pear trees, grafted on Quince stocks and trained to the walls, have been trained "en cordon" by the venerable and talented Robert Thomson for some forty years past; and I may add that in every good fruit garden in England Pear trees are trained after the same method. The cordon method of training trees not attached to walls, but growing in gardens and orchards, seems to have had its origin in England, but, as I presume, has not been widely spread, owing to the peculiar prejudices of cultivators of the soil, who seem to take great delight in closing their senses to any new thing. This feeling has always existed, and I am inclined to think always will exist; for only go to Damascus and try and instruct the cultivator how to regulate his water-courses otherwise than by his foot, he would turn upon you an evil eye.

To return to cordon orchard trees. I am able to relate a curious fact in support of my assertion that this mode of training is of English origin. In a farm-house in Sussex, not many miles from Tunbridge Wells, lives an old tenant farmer, in whose orchard are numerous cordon Apple trees, some fifty

years old. On being interrogated as to how he came to train his trees so differently to those of his neighbours, he very promptly said that he found the common orchard trees shaded such a large quantity of ground, and gave such unequal crops (sometimes so abundant as to be of no value), that he should like to grow more trees, and thus have a greater variety of fruit, so as to have "more chances." This he soon found he could do by pruning his trees in summer (a modification of hedge-clipping), and in this manner he formed his cordon Apple trees, which he has always found to bear the finest fruit; and from his being able to cultivate some ten or fifteen cordons with from five to seven branches to each tree in the area that one common orchard tree would occupy, he is a large gainer.

Many of your readers even now may probably ask, What is, after all, a cordon tree? Well, it is simply a branch, or single-stemmed tree with all its young shoots shortened during the summer, so that it takes the form of an upright Cypress or a Lombardy Poplar in miniature. This closely pruned branch bears its fruit close to the stem, something after the manner of our familiar "rope of onions," hence its pretty French name. These cordon trees may be trained to wires horizontally—(an old English practice)—or in the fan shape; also on a single wire close to the ground, to form an edging for borders in the fruit garden. This is a modern French practice really pretty and economical. The pyramidal method of training fruit trees is probably French, but has been introduced to our gardens some thirty or forty years. This method for small gardens is the most interesting and profitable of all systems of training trees in the open air; and when it is well understood by our intelligent artisans it will make their fruit gardens a constant source of interest (leading to a refinement of manners earnestly to be wished for in our working men), and our suburban gardens fruitful and of increased interest and value to their occupiers. I have had much experience in rural life, and I have always found the working man who managed his garden skilfully to be a good member of society.

The Paris correspondent of the *Times* writes with the enthusiasm of a tyro respecting the villa gardens near Paris. He seems to have forgotten the difference of climate, which owing to increased sun heat there is so favourable to the production of Pears and Plums on pyramidal trees, while in a large portion of England and Scotland choice varieties of such fruits will neither bear fruit nor ripen it in the open air. Still, if he had made use of his eyes he might have seen thousands of gardens in the warmer parts of England, and also in Ireland, well furnished with pyramidal fruit trees. I know of their existence, and have often witnessed the careful culture bestowed on such trees by intelligent amateurs of gardening. This improved method of fruit-tree culture will soon be widely spread, so that our most humble gardeners may enjoy the luxury of home-grown fruit. I do not dispute the facts given by the writer in the *Times*; I merely wish to convey, that as far as our climate will allow, we are not behind our neighbours in open-air fruit culture. This truth he seems to ignore, merely, I trust, from lack of experience.

With respect to the flavour of English fruit, it is unequalled; no country in Europe can produce its like. This seems a hardy assertion, and I feel it a duty to give the reason why—It is owing to our temperate climate, which does not ripen fruit too rapidly, and thus prevent the development of its flavour. It is the extreme heat of the sun in the warmer parts of the Continent that makes Peaches hard and Apricots mealy, Apples dry and tasteless, and Pears large and deficient in flavour. It must not, however, be forgotten, that to obtain our fine fruit in England, the trees must be cultivated under very different circumstances to those on the Continent. Here they must be trained to walls, or planted in structures of glass, in which they would be scorched and suffocated if on the slopes of the Mediterranean. It is the old story repeated, where Nature is liberal man is indolent, so that many gardens in the far north of the United Kingdom could show a finer collection of fruit than any garden in the kingdom of Italy. There are but few, very few, fruit gardens on the Continent so perfect in every respect as our first-class English gardens. Hundreds, aye thousands, of such may be seen, their ownership not confined as formerly to the upper class, but to a large and increasing class of business men who have gardening taste, and derive much pleasure in its cultivation.

Glass structures of enormous extent filled with the finest fruit in the world, and under the most perfect cultivation, may now be seen in every district favoured with a fair average English climate.

This superior culture is not, however, confined to the first-

class gardens of the wealthy, but extends even to what may be called the gardens of the people, for in almost every respectable village garden may be seen the vinery for growing Grapes without artificial heat, and the orchard-house for the culture of Peaches and Apricots. These unheated glass structures, as a rule, produce much finer fruit than that referred to in the *Times* as being offered for sale in the markets and streets of Paris; and as to the superior flavour of our fruit ripened slowly in such houses, I have some evidence to offer.

In the month of August I had the pleasure of receiving a visit from the American gentleman (a great lover of fruit) who had been for two months in Paris as horticultural commissioner for the United States. His love for gardening prompted him to visit the principal gardens on the Continent, to taste European fruit, about which he had heard so much in America. I gave him some Peaches, Apricots, and Nectarines, gathered from my orchard-house. They have ripened slowly this cool summer, and he pronounced them to be the most perfect in flavour of any he had ever tasted either in America or Europe.

The "London Market Gardener" of the *Times*, in his blunt patriotism has told some truths which seem unpalatable to the Paris writer. He is, however, quite correct respecting the long use of the cordon system in England; but he is not so in his disparagement of the single cordons. There are many modes of cordon training, such as the diagonal, the vertical, &c.; but as far as I can observe, the pet method with the Paris correspondent is the single horizontal cordon, trained to a wire near the ground. This method, owing to the sun heat reflected from the surface of the soil, produces remarkably fine fruit; but in France, and in gardens with warm soils even in England, Apples ripen too rapidly, so that a Ribston Pippin becomes dry and tasteless. In cool seasons and on cool sites Apple trees thus trained produce the finest of fruit; for Pear trees in England neither site nor soil can be too warm. With respect to French Pears, I must beg leave to correct the Paris correspondent of the *Times*. Nearly all our popular kinds of Pears are of Belgian origin. They have French names it is true, but Belgium in language is a French province, and no Belgian gardener would give an uncouth hybrid Dutch name to a new kind of Pear.

As to the French Asparagus so eulogised, the valley of the Seine seems highly favourable to the growth of it; its culture is also skilfully managed; and its flavour owing, I am inclined to think, to the brighter sun of France, is very good indeed. It is to be regretted that a more refined method of serving it is not practised; instead of those short, club-like white sticks with green ends, the latter only should be sent to table, so that they could be eaten in a civilised manner with the fork.

In one of the communications from the Paris correspondent of the *Times*, French salads are alluded to as something remarkable. There is no doubt but that a salad of tender Lettuces sprinkled with small herbs, such as Corn Salad, &c., and served with fine oil and vinaigre d'Astragon (Tarragon vinegar), as usual in Paris in the superior restaurants, is of high excellence; but the winter salads of Paris composed of Barbe de Capucin (wild Endive), and Dandelion leaves blanched in cellars, are bitter and most disagreeable to the English palate.

The large green bell-glasses employed by the market gardeners near Paris to such an enormous extent, should be things of the past, as they are clumsy, and so liable to breakage. Our modern English method of planting Lettuces and Endive for winter salads, in our cheap unheated glass-structures, in which, except in severe frost, we have the mild, dry winter climate of Madeira, is very far superior, for in them the gardener can attend to salad culture without the least inconvenience, and if needed he can efficiently protect his choicest salads from severe frost. In the months of January, February, and March, I derive all my choice salads from such houses, and owing to the mild, soft temperature in which they have grown, I find them most tender and succulent—far superior to the winter salads of Paris.

English gardeners owe a heavy debt to the late Sir R. Peel for his judicious repeal of the duty on glass. No modern act has so largely contributed to the comfort and well-doing of the middle classes of England, for annually thousands of unheated glass structures are built, and when their use is more fully understood by English market gardeners, Peaches, Nectarines, and Apricots will be cheaper, and much superior in quality to those offered in Paris. The Peaches sold cheaply in the markets of France are varieties raised from Peach stones, the trees not grafted. They are generally called "Pêches de Vin," and are gathered from standard trees planted in the vineyards to the

south of Paris. As a rule, they are very inferior, and hunger and thirst would be the only tempters to attack a basket of them to any extent, for a bad Peach is the worst of all fruits.

The Paris correspondent is unjust to English gardeners when he says that "the Peach [tree] is generally seen, even in first-class gardens in England, straggling with a few shoots over a nearly bare wall, and the mere ghost of what it ought to be." This, as I well know, is quite contrary to facts, for in our first-class gardens they are as one hundred to ten of the same class in France; the Peach and Nectarine trees trained to walls are models of beauty, perfect training, and fruitfulness. We must, therefore, conclude that the person in Paris who writes so fluently in the *Times*, knows but very little either about English gardens, English gardeners, or fruit-tree culture.—THOS. RIVERS.

TRANSPLANTING FRUIT TREES.

I ACCEPT your invitation in reply to "BETA," and feel pleasure in communicating my observations and experience, such as it is.

First, with regard to the removal or transplanting of trees and subsequent treatment. On the 29th of September, 1865, I planted in my garden, at Bath, in a wretched soil, a Washington Plum, Orleans, Morello Cherry, Ribston Pippin, a very young Marie Louise Pear, and an Apricot. The first three bore fruit, of Cherries enough to make a large bottle of "bounce." All but the Pear were large trees. I have no idea of waiting long for fruit from a fruit tree. All these had their full foliage at the time of transplanting (a very essential element of success in my opinion), which I took great pains to preserve as long as I could, being aware of the mutual offices of the different members of trees generally. These can only be preserved by frequent waterings, and must on no account be neglected for a single day, or the terminal leaves will flag. If they stand erect it is a sure sign the tree is making young rootlets—the very life-preserving, fruit-creating power of the tree. If an ounce of salt be added to every gallon of water so much the better; the effect is marvellous.

I removed from Bath to Seend on the 27th of September, 1866, bringing all my trees with me. I took them up about the 24th, and they were out of the ground nearly a week, still preserving their foliage, being kept in a damp outhouse, with their roots protected with matting. Everything was in my favour as to weather and ground.

I planted the aforesaid trees—Orleans and Washington Plum, Morello Cherry, and Apricot in the front of my house, due south. I have had this year a fine crop of Plums. The Washington on this aspect is both beautiful and delicious, and the Orleans cannot be surpassed for beautiful bloom. This tree was much blighted, but I did not allow the aphid or any other insect to have undisputed possession; I kept a vigilant watch, and saved my crop. I had an excellent crop of Cherries. The Apricot brought only one to perfection. This was partly my own fault; want of protection, and also on account of its not striking so readily as the Plum tribe. The Ribston Pippin blossomed well, and would have borne a proportionate crop, but I compassionated all my trees, and left an excellent prospect for another year. I allowed of none to bear more than half the fruit set, at 6 inches apart, and only one Cherry to a blossom-bud.

On an easterly wall I planted Coe's Golden Drop, an old tree which I also brought with me; this has some fine Plums. The following are the sizes and dimensions of the trees:—Morello Cherry, dwarf—circumference near the ground, 5 inches; height, 6 feet; space covered, 6 feet. Washington Plum, standard—girth, 7 inches; covers a space of 5½ feet in width; 10 feet high. (I am confined for room, therefore the boughs are trained as close as possible.) Orleans Plum—girth, 6 inches, standard; 9 feet 9 inches high; space covered, 4½ feet. Apricot, dwarf—girth, 4½ inches; height, 6½ feet; covers a space of 7 feet; a luxuriant and promising tree. Golden Drop—girth, 7 inches; 6 feet high; but spare foliage, very healthy, and full of blossom-buds. This was what I call a double-rooted tree—that is, after the first roots, I suppose a tap root in forcing its way down in search of better soil, throws out a fresh bunch, leaving an interval of a few inches between the two. I cut off the lower, and planted on the stump and the first roots.

On the 2nd of November I planted a Nectarine Plum on the same aspect. Girth, 8 inches; height before boughs, 5 feet; total height this year, 14 feet; covers a space of 9 feet. Had a splendid bloom. I allowed a dozen and a half magnificent Plums to ripen. This tree was very indifferently rooted; but I made the best of them, shortening the wood roots, and nourishing and cherishing the rest.

My mode of planting is to keep the roots near the surface. Suppose the roots are a foot deep; I plant them that depth, and so whatever they may be, the tap roots being almost visible. Of course the habits of the tree must be studied. Plums are not particular. Apricots are rather early, and must be humoured; if one sort of mould won't do, try another. Cherry rejoices in shallow planting and old lime pounded. My Ribston Pippin (girth, 10 inches; height, 6½ feet; width, the same), is a bush tree, growing on a forked stem, and thriving well. For all sorts of Apples a limestone foundation and intermixture is desirable; when first moved it was as much as one man could carry.

Root-pruning, so much talked of, requires judgment. It sometimes happens that an espalier Apple does not bear, and the poor roots are condemned, whereas it may be, after all, the fault of the soil and want of carbon.

Pear trees frequently require root-pruning. Why is this? They are planted in ungenial soil. The roots go in search of suitable food (for trees seem to be endowed with sense of discrimination as to their proper nourishment). When they find what they are in search of they push out a bunch of rootlets. If they are cut short the wood root sends out fibres, which extract the nourishment around the immediate neighbourhood of the tree, which becomes an artistic instead of a natural operation. The large wood roots of a tree, I take it, are only intended, or principally, to keep the tree in the ground. Root-pruning is not the panacea for barrenness.

All things being equal, I will undertake to move a tree of any size, and will guarantee its bearing—that is, with right time of planting, proper soil, judicious watering, and aspect. Newly-planted trees are better protected through the winter with a top-dressing of stable dung, but should on no account be planted in it. Some people suppose Filbert trees should be left to Nature; but it is a mistake. They require the same treatment as other fruit-bearing trees, and especially the aid of catkins if they have none of their own. At Cheltenham Pear trees luxuriate in a red soil. The roots require no pruning; but as the trees grow old they acquire a corkscrew finish. How is this?—EXCELSIOR, *Seend Villa*.

I AM very much inclined to be of the same opinion in regard to moving trees as your correspondent "BETA;" and my experience teaches, that trees never ought to be moved till part of the foliage has fallen.

I recollect some ten years ago that I planted about four dozen of dwarf Apples for espaliers about the end of September, when there was not the slightest appearance of the leaves coming off—in fact, they were quite green; but to make sure of getting first-class trees, I went to the nursery myself and picked the very best I could find. The ground was well prepared as far as trenching and everything required to ensure success; but I am sorry to say far otherwise, for there was only one variety out of the whole collection that made anything like satisfactory growth in the following season; and though none of them actually died, the greater part of them would have proved quite as satisfactory if they had departed this life, for they never overcame the effects of the removal. It is an old saying, and I think a very true one, that "Bought experience is best," and I am sure in my case it has been so; for although I have lifted some scores of fruit trees and transplanted them, not only to my own satisfaction, but also to the satisfaction of my employers, I never begin to do so till the greater part of the foliage has dropped.

In some seasons I begin earlier and in some later, the falling of the leaves being my guide, and seldom now have I any occasion to repent my looking a little to Nature.—JAMES STEWART, *Nunham Park*.

POOLEY'S GROUND TOBACCO AND ITS USES.

HAVING yesterday, through the kindness of Mr. Robson, my excellent *confère*, had the opportunity of visiting the Hop gardens of Mr. Bannerman, of Hunton, near Maidstone, who farms 330 acres of Hops in that parish, I there learned something about the use of tobacco which may be interesting to those who are doubtful of the success of such wholesale applications of vermin-destroying potions; but I never could see, if so could destroy the aphides, &c., on our Roses, why in such a valuable commodity as Hops it would not pay to do it. So Mr. Bannerman thought; and as nothing could be more unpromising than the Hops were a few weeks ago, he set to work,

and has been enabled to wash 100 acres. The ground tobacco is boiled along with soft soap, and the decoction is then strained. It is carried out to the grounds in a large tub, and the men, provided with tarpaulings (for it is a nasty job), set to work. The engines used are Read's double-hosed, with flexible indianrubber hoses. One man works the engine while two preside at the hose. In some cases where they were very bad they were syringed twice, and the result has been that an excellent crop is fit for picking. Close by, at the corner of the bailiff's garden, one hill was left for experiment unwashed, and this is as black as a coal, and without a single Hop on it. The cost of this washing is estimated at about £3 per acre—a small item in Hop culture, and well worth expending on a crop of which two thousand pockets were lately sold for £18 a-pocket.—D., *Deal*.

MUSCAT AND HAMBURGH VINES TOGETHER.

I HAVE five young Muscat of Alexandria Vines which I am desirous to plant in a house where there are already six Black Hamburgs. I force this house, and cut in May and June. I shall cut these Vines to about 2 feet this autumn. Would it be better to repot these young Vines into larger pots, and place them in a cooler house till next autumn? I should prefer planting this if the forcing next year would not weaken them.

Should you advise planting this year, how can I plant these between the other six, so as to injure the roots the least? The border is an inside one.—SUBSCRIBER.

[We have planted Muscats alternately with Hamburgs, but we do not consider it a good plan. They do best by themselves or in one end of a house. If your Hamburgs are ripe in May and June, we would plant the Muscats directly, and not cut them down until winter. How to do so between the Hamburgs without injuring the roots of these we cannot tell further than saying great care will be necessary, getting out an opening with hands and forks, and adding as much fresh soil as possible.]

SELECTION OF ROSES.

The main object I had in view in giving my opinion of the Rose *Maréchal Niel* (page 96), was to elicit from other cultivators their experience with that variety, and so far as given, I fail to discover wherein their success is greater than my own.

Mr. Cant recommends a south wall. I presume his plant so grown is not on the Briar. Mr. Rivers says, *Gloire de Dijon* is a most excellent stock for it. Messrs. Merewether, who, by the way, are somewhat poetic in their description of the *Maréchal*, give their experience with it on the *Manetti*, planted out in April in a south border. With good soil, proper cultivation, and the plants kept clean and healthy, I do not see how they could have better treatment.

Nothing I have yet seen or heard has altered my opinion. The flower is splendid, but the plant is tender, and a very, very, shy bloomer, and a bad opener. It requires cultivation peculiar to this class of Roses to do any good with it.

As to the Roses recommended by me, they never were meant as a very select list, in the manner your readers would infer from "*D., Deal's*" criticisms (albeit, they contain the cream of every colour grown), but simply a list from which might be selected plants of any colour from pure white to almost black, and dependence upon good growth and abundance of bloom not to be disappointed, which is more than can be said of many much-vaunted varieties. No florist would recommend *Nell Gwynn* Pink as an exhibition flower, but few will deny its utility as a border plant. For the same reason I recommend for general cultivation Roses that would not be tolerated on an exhibition stand.

Eugène Appert is a healthy strong grower of fine foliage, and a beautifully coloured flower. It invariably gives satisfaction to the purchaser—a great point in favour of any flower. I admit that *Duc de Wellington* and *Fisher Holmes* are not full, but in their peculiarly bright-coloured class one is compelled to overlook this imperfection when the varieties under consideration are not for show. Of the Roses mentioned by "*D., Deal*," as superior, *Pierre Notting* hardly opens well; when it does it is good, but it burns badly, and so do all the dark sorts mentioned by him. Of the rose-coloured sorts, *Anna de Deisbach* is rather loose, but of first rate habit. *Louis Peronny* is a very bad grower, *La Reine de la Pape* is much superior, *Madame Bell* is flat. The others are good, but I would not select William Griffiths.

Of newer sorts, I prefer the Princess Mary of Cambridge to *Marguerite de St. Amand*. *Alfred Colomb* is a good Rose, but we have already as good varieties as *Abel Grand*, *Josephine Beauharnais*, and *Miss M. Dombrin*. *Docteur Andry* is a good Rose, but how about liability to mildew? I would recommend *François Goeschke* for its splendid colour. *Baronne de Maynard* as a white *Noisette* is good.

Such is my experience. Soil, cultivation, and position alter the character of flowers very materially, but of none more than the Rose. Yet there are several varieties which do invariably well, and these I recommend to purchasers.

In conclusion, although we may differ as to the merits of certain Roses, I hope "*D., Deal*," will long continue to

"Strike out with master hand, a copy fair of his ideas."

Whether the subject be new Roses, *Pelargoniums*, *Gladiolus*, or any other flower, he may depend that I shall take note of everything connected therewith.—F. FLITTON.

APRICOTS.

IN reading Mr. Abbey's excellent and carefully written article on the culture of Apricots as wall trees, I have been much struck with the time consumed before a tree can give a good crop, and the constant summer and winter pruning and nailing which every season must bring on. This has led me to the great contrast offered by orchard-house culture of this (when properly ripened) most excellent fruit.

For many years I have with great success cultivated Apricots in pots, and it is only a few years since that I was tempted to plant out in one of my orchard-houses some trees with stems from 3 to 5 feet in height, called respectively half-standards and standards. They were in a bearing state, having been grown in pots for two seasons, and were planted in a hard undug border. This was done for an experiment, as I had found solid earth so beneficial in pot culture. These trees bore a good crop the first season after being planted, and have continued to bear abundantly every season. The only trouble I have had has been in thinning the fruit, as almost every blossom has set. Their culture has been most simple, and has consisted in pinching in the young shoots during the summer so as to make their heads compact. They have been syringed once in two or three weeks, merely to wash the dust from their leaves; and the blue aphid, to the attacks of which they are subject, in some seasons has been destroyed by quassia water, 1 ozs. to the gallon, boiled ten minutes. The soil has not been stirred, but remains as solid as the path which passes near them. As some trees in pots are standing on the border which have had water, none has been given to the trees; but as they increase in size their shade will prevent potted trees being placed on the border, and then they would require a drenching of water once a fortnight during the summer and till the end of September, being kept perfectly dry during the winter till March. This method of growing Apricots is so simple and artificial, and the fruit the trees produce so superior to that given by wall trees, that one feels surprised it is not carried out to a large extent. Mr. Solly, the fruit-grower at Bath, who grows Apricots planted out and in pots with great success in his orchard-houses, speaks of the fruit as of the highest quality. The fact is, that an Apricot dead ripe with its skin slightly wrinkled is one of the finest fruits in the world. I commenced to gather Apricots from trees in pots on the 24th of June, and continued to do so daily till the 24th of August. The first full-sized Apricot that ripened was *Oullin's Early Peach*, and the last the *Peach Apricot* and one or two late varieties raised from seed.

The most interesting trees when loaded with fruit were some large bush trees some fifteen years old, and some hundreds of cordon trees—i. e., pyramids, their shoots closely pinched in. One house, 100 feet long and 14 feet wide, filled with such trees nearly all studded with their golden fruit, was the most perfect specimen of successful fruit tree culture in pots ever seen. The soil employed is a stiff calcareous loam two-thirds, and one-third manure thoroughly decomposed. The soil is left undisturbed till the fruit is the size of a horse bean.—T. R.

THE SHOW OF VARIEGATED AND OTHER PELARGONIUMS, to be held at the Royal Horticultural Gardens, on Tuesday next, the 17th inst. Other subscriptions having been received in addition to the prizes announced the following will also be given:—Class 9, The two best Golden Variegated Zonal Pelar-

goniums, in commerce or not, two varieties, three plants of each, 25s. and 15s. Class 10, The best six Gold and Bronze Pelargoniums, put in commerce within the last twelve months, 25s. and 15s. Entries for these classes will be received by Mr. Moore any time on Monday, the 16th.

DWARF APPLES ON THE DOUCIN STOCK.

HAVING received inquiries respecting the Apples shown by me before the Royal Horticultural Society on the 3rd inst., I have much pleasure in making public the mode of culture adopted here, and the results.

The Doucin stock is akin to the Paradise, but on this soil roots and grows more freely, the roots often pushing in profusion just above the level of the soil, and striking downwards into the earth. The second year after the graft is put in the plants are often a yard high, forming perfect pyramids covered with their snowy crimson-tinted blossoms in spring, and laden with fruit in autumn. Twenty to thirty fine fruit on each tree is no uncommon result. They are beautiful objects both in the flowering and fruiting season; admirably suited for small gardens, as they take up little room; are highly ornamental, and very productive. Some of the fruit exhibited were gathered from trees transplanted last March. I graft in spring, let the trees take their natural growth the first summer and autumn, shape them by pruning and pinching the next summer and autumn, when they are transplanted, and fruit abundantly the following year: so that trees grafted in 1865 were formed in 1866, and fruited in 1867. As the trees increase in age and size the fruit of course increases in quantity.—WILLIAM PAUL, *Paul's Nurseries, Waltham Cross.*

DUBLIN WINDOW GARDENING.

A CLEVER correspondent of THE JOURNAL OF HORTICULTURE (Mr. Fish), when over here some two or three years since, and writing from Dublin to that paper, remarked, that in passing even through the best parts of our metropolis he was disappointed by the absence of those practical indications of the love of plants and flowers so characteristic of Englishmen and English towns. If we remember rightly, he said that, with one exception only, did he observe any attempt at window-gardening, and this exception consisted merely of a jardinière, gay with dwarf scarlet Geraniums on a window-sill in Clare Street. To a great extent we must plead guilty to this charge; but it must be remembered that Mr. Fish's visit was at that time when the inhabitants of our squares and best streets are at their country or sea-side quarters, and their town residences deserted. If he had visited us at an earlier period of the year he would have seen in the same neighbourhood several nice specimens of spring window gardening. A taste for plants and flowers is by no means wanting even among the humbler classes of our people; it may be latent, but, nevertheless, it is there, and only requires a little encouragement to develop it. Even in the by-ways and dingy alleys of the town examples of this taste frequently meet the eye, and we have often stopped to admire the humble plants, and the supplemental shifts had recourse to grow them.

We are always glad to note the extension of this taste; for we believe the more it spreads all classes will be the better of it, both materially and morally. We are led to make these observations by incidentally observing in passing through Leinster Street a very pleasing example of window gardening. In a house of business in the street just named, with few and simple materials, the owner has managed to give the front of the building quite a gala appearance. On the sills of the windows of the drawing-room and second floors are wooden boxes filled with dwarf Nasturtiums. At the end of each box is a plant of the pretty yellow *Tropæolum canariense*, and this is taught to steal up cords or wires, define the architectural lines of the windows, and fringe them with living beauty, in the shape of delicate green foliage and golden flowers. The effect is pleasing and pretty; and if the recurrence of such were frequent, the streets would look for weeks as though our city were keeping high festival. We could not help admiring the pleasing conceit, and turning away with the impression, that the habits and dealings of the proprietors are not the less business-like and satisfactory for this pleasing employment of the leisure hour.—(*Irish Farmers' Gazette.*)

[We are very much pleased to learn that Dublin is improving in window gardening. In gardening in general Ireland is

anything but behind, and though much is still wanted in her farming, there are patriotic noblemen and gentlemen who might well give an example to many on this side of the water. We trust that brighter, happier, and more prosperous days are in near realisation for her warm-hearted sons and daughters, when the simple fact shall be better understood that properly remunerated work is the cheapest mode of having labour performed. With hardly or little more than a shilling a-day, we did see nice plants and gardens belonging to such wage-earners. What may we not expect when, even on the principle of supply and demand, these wages shall be nearly doubled, and with increased enjoyment to the workers, there shall also be augmented profits to the employers?]

GROWING MELONS WITHOUT ARTIFICIAL HEAT.

I NOTICE in your Journal of the 6th inst., that there was laid before the Fruit Committee of the Royal Horticultural Society, a Melon that had been grown without bottom heat, and that it was handsome-looking, but of poor flavour.

Now, for a good many years (because in a small garden the wheeling-in of manure is dirty and littery, and troublesome), I have grown my second crop of Melons without any bottom heat, and I find the fruit is quite equal in flavour to that of the earlier Melons that are more petted and coddled, and the plants, if there be a difference, more productive.

My plan, a very simple one, is as follows:—In the last week of April, or first week of May, I throw roughly into each frame the needful amount of mould, good stiff loam, with a little well-rotted manure mixed with it. I shut up closely through the day; and at night, directly the sun is off the frame, I shut up as carefully as if the plants were already there. Thus I go on for ten or twelve days, only I am careful to turn up the soil afresh every morning, so as to expose a new surface daily to the sun. I then put out the plants, and pleasant it is to see how they thrive and speed. Indeed, any one who would take the trouble to ascertain with his hand how great an amount of heat is thus stored up, would well understand their satisfaction with the quarters they have got into.

"One word" if you please, for your agreeable correspondent, Mr. Radclyffe, whose letters to you I always read with pleasure, not only for the instruction they give, but for the earnestness and readiness with which he imparts it. I had not the most distant thought of doubting his perfect truthfulness; and on looking again over my late hasty communication in your pages, I am at a loss to see what expression therein could by possibility have suggested the feeling.

He may well be pleased with what he has accomplished—288 Roses transplanted early in August, with scarcely any loss. But then the time, the pains, the trouble! After all it is, I suppose, only an illustration of our friend Sancho's opinion, who affirms that all success is due to the "studying hard, and having favour and good luck."—BETA.

DOLLY PENTREATH'S EPITAPH.

I CAN answer your correspondent's question respecting Dolly Pentreath's epitaph. Prince Napoleon, being a great linguist, went to Cornwall in 1860 to ascertain the Cornish dialect, and from thence proceeded to Iceland to learn Icelandic and Norse. Not being able to find the grave, he gave the rector money to have a memorial erected and placed in the wall, having been told that she was the last person who could speak genuine Cornish.

She was married and had children, and died at the age of 102. That accounts for the text on the stone. Possibly Dolly was conspicuously a dutiful daughter. She died in 1778.

"Old Dolly Pentreath, one hundred aged and two,
Deceased and buried in Paul parish too;
Not in the church with people great and high,
But in the churchyard doth old Dolly lie."

She was born and died at Moz-hayle, now corrupted into Mousehole.—F. DAVIES, *Pershore.*

POISONING CATS.

YOU rightly inform your correspondent, "HENLEY," that no law prevents his putting poisoned meat among his Cabbages, but if he should use arsenic or any other painful poison, he

will be liable to be prosecuted for cruelty to animals. Why he should wish to destroy his best friends, which do not eat his Cabbages, but clear the garden of rats, mice, and other enemies, I cannot imagine. Surely the only damage ever done by cats to gardens is, that they sometimes disturb the surface of newly-dug ground, while they are at the same time manuring it. One of your correspondents once before pleaded the cause of "poor, fond, affectionate pussy." We hear much of the plague of birds, but seem to forget that it is our own fault, by killing and endeavouring to exterminate not only cats, but hawks, kites, and other predatory animals, which were created for the express purpose of keeping in check any undue excess of birds and mice.—G. S.

CRYSTAL PALACE AUTUMN SHOW.

THIS autumnal Show, continuing Tuesday, Wednesday, and to-day, is superior to that of last year, both in the number and quality of the specimens exhibited. The number may be appreciated by the fact that there were about 650 exhibitors.

The Flowers, conspicuous chiefly in Dahlias, Asters, and Gladioluses, were arranged down the middle of the centre nave, then came an interval fronting the orchestra, and beyond them, also along the middle of the nave, were the fruits.

The Judges of Fruit were Messrs. Solomon, Ruffitt, Edmunds and Kinghorn; of Flowers, Messrs. Barnes, Turner, Robinson & Holmes. For collections of Fruits, both superior.—First, Mr. T. Bailey; second, Mr. C. Smith.

The Pine Apples were not numerous, but very superior in size. The first-prize Queen weighed 6 lbs. 4 ozs. For a collection.—First, Mr. T. Bailey; second, Mr. Rattray; third, Mr. Page. For Queens.—First, Mr. Rochford; second, Mr. Rattray; third, Mr. Davies. Other Varieties.—First, Mr. Peuney; second, Mr. T. Bailey; third, Mr. M. Rochford.

The Grapes were very fine. The Barbarossas, perhaps, as fine as any we have had to report upon. Grapes 12 lbs.—Equal firsts, Mr. R. Norris and Mr. E. Sage; third, Mr. G. Osborne. For Black Grapes.—First, Mr. R. Norris; second, Mr. E. Sage; third, Mr. G. Osborne. White Grapes.—First, Mr. R. Laing; second, Mr. G. Geirs; third, Mr. J. Hollingworth. Grapes, Largest Bunch.—First, Mr. J. Douglas; second, Mr. T. D. Irving; third, Mr. G. Osborne.

Of *Peaches* there were sixty-eight exhibitors.—First, Mr. W. Page; second, Mr. T. Paine; third, Mr. J. W. Chard.

Of *Nectarines* there were also sixty-eight exhibitors, and of these brother fruits we never saw finer.—First, Mr. T. Frost; second, Mr. J. Fraser; third, Mr. H. Geirs.

The *Melons* were of average merit. For Green-fleshed, of which fifty-three were shown.—First, Mr. W. Beech; second, Mr. T. Simmonds; third, Mr. W. Richbell. Melons, Scarlet-fleshed, forty-four exhibitors.—First, Mr. J. Alliston; second, Mr. C. Pitts; third, Mr. J. Standish.

Cherries. The Bigarreans and Morellos were very good.—First, Mr. T. Bailey; second, Mr. O. Goldsmith; third, Mr. R. Marcham; extra, Mr. G. Sage.

Of *Plums* there were thirty-one exhibitors.—First, Mr. R. Webb; second, Mr. G. Sage; third, Mr. W. Holder; fourth, Mr. T. Bailey.

In *Apples*, dessert, there were thirty-three exhibitors. The fruit was below the average. First, Mr. G. Grover; second, Mr. R. Webb; third, Mr. V. Wallis; fourth, Mr. J. Bath. Kitchen Apples were very superior. Of the thirty-one exhibitors the prizes were taken by —First, Mr. J. Mortimer; second, Mr. W. Newman; third, Mr. H. Geirs; fourth, Mr. H. Anstiss.

Pears (three dishes), were below the average in quality, though there were twenty-eight exhibitors. First, Mr. D. Cooper; second, Mr. G. F. Wilson; third, Mr. R. Webb; fourth, Mr. C. Towill. Pears, for the heaviest.—First, Mr. O. Goldsmith; second, Mr. J. Morris; third, Mr. J. Rabbit. Pears, for the best flavoured, there were no less than fifty-one competitors.—First, Mr. T. Bailey; second, Mr. H. Thorneycroft; third, Mr. G. Grover.

Apples in pots were very few, but excellently fruited.—First, Messrs. H. Lane & Sons.

Peaches in pots.—First, Mr. H. Waller; second, Mr. J. Fraser. There were only three competitors in these two classes.

In the *Miscellaneous* class the following were selected for prizes out of thirty-one competitors.—Mr. J. Fraser and Messrs. H. Lane & Sons for fruit trees in pots; Mr. W. Sams for Cucumbers; Mr. G. Sage for Bananas; Mr. E. Bennett for a dish of fruit; and Mr. R. Webb for Nuts. These Nuts, Filbert and Cob, deserve especial notice, for they excelled both in size and quality. Mr. Webb is the well-known proprietor of Calcut Gardens, near Reading. At the Show he had a pamphlet on their culture distributed gratuitously, and we must find room for one extract from its pages:—"Cob Filberts were the foundation of the produce; and here I can truly say that the land on which they were planted has proved a very profitable speculation, and to prove the fact I will now state what has grown on parts of this plantation, which will be quite sufficient for our present inquiry. Early in September we commenced gathering, and from half an acre of ground we had 1300 lbs. of Cob Filberts, and also upon another three-quarters of an acre 1700 lbs., besides Apples, Pears, and Potatoes

above and beneath. Now, it must be remembered that the past season has been by no means an abundant one for Nuts; but as it is, we will now see the value of the produce first upon the half acre when we began—viz.,

1300 lbs. Cob Filberts, sold at £7 per 100 lbs.	91	0	0
40 bushels Apples	20	0	0
Potatoes	7	10	0
	£118 10 0		

"Now this will be, according to this calculation, £237 per acre. Again, the 1700 lbs. on three quarters of an acre Cob Filberts *actually* sold at £7 per 100 lbs., and some at £7 10s., will be, if we calculate them at

£7 per 100 lbs.	119	0	0
50 bushels Apples	35	0	0
20 .. Pears	5	0	0
Potatoes	5	0	0
	£159 0 0		

Add one quarter more for the remaining quarter of an acre

Return per acre £198 15 0

"I think, therefore, after nine years' experience, I am fully justified in anticipating what I have stated, that from £200 to £300 per acre may be easily accomplished in growing Cob Filberts and other Nuts of best quality."

GREAT were the lamentations in the horticultural world when it was understood that the Crystal Palace Company (which must necessarily be governed by the vulgar considerations of "does it pay?") had determined to abandon their autumn show. It was felt, and justly felt too, that there would be thus no opportunity of seeing the beautiful autumn flowers which are so highly prized and valued by a large class of growers; and when it was announced that they had reconsidered their determination much satisfaction was expressed. The schedules were again sent out; and although the Show has been held at a somewhat later period than usual, I never saw a better exhibition at this time of the year; and while no inferior flowers were exhibited, the excellence in some classes, especially Dahlias, was very marked. Some beautiful stands of Roses were exhibited; and the Gladioli (although it was somewhat late for them), were nevertheless objects of great interest to a large number of visitors. There was nothing very new in the varieties of Roses that were exhibited, but the individual blooms were wonderfully fine considering the season of the year. There were some blooms which would have been creditable to a stand at any season. In the Nurserymen's class of 36 the first prize was awarded to Messrs. Paul & Son for a fine box of blooms containing good examples of *Maréchal Niel*, *Charles Lefebvre*, *Senateur Vaisse*, *Madame Victor Verdier*, *Souvenir d'un Ami*, *La Brillante*, *Exposition de Brie*, *Alfred Colomb*, *Gloire de Dijon*, *Victor Verdier*, *Jean Lambert*, *Souvenir d'Elise*, *Alex Dufour*, *Sophie Coquerel*, *Camille de Rohan*, *Vicomte Vigier*, *Abel Grand*, *Josephine Beaumais*, and *Gloire de Vitry*. Mr. Keynes was second, and Mr. H. Coppin third.

Messrs. Paul & Son were again first in 21 single blooms, their varieties being *Joseph Fiala*, *Eliz. Vigneron*, *Maurice Bernardin*, *Souvenir d'un Ami*, *Madame C. Verdier*, *Charles Lefebvre*, *Madame Caillot*, *Vicomte Vigier*, *Achille Gonod*, *Pierre Notting*, *Ladla*, *P. of Cambridge*, *Leopold I.*, *John Hopper*, *Camille Bernardin*, *Madame Villermoz*.

There was a splendid contribution in the class for 18 by Amateurs, the first prize being gained by Mr. T. Draycott, gardener to T. T. Paget, Esq., with *Lord Clyde*, *Triomphe de Rennes*, *Duchesse de Caylus*, *M. Bonnaure*, *Lord Herbert*, *Lord Macanlay*, *Senateur Vaisse*, *Gloire de Dijon*, *John Hopper*, *Col. de Rougemont*, *Beauty of Waltham*, *M. Bonbon*, *S. de Malines*, *Charles Lefebvre*, *Antoine Ducher*, *Aurora Boreale*, *La Ville de St. Denis*. The second by Dr. Cooper of Slough, and the third by Mr. J. W. Chard.

The Rev. Mr. Radclyffe, of Okeford Fitzpaine, exhibited (not for competition), a very beautiful box of blooms, comprising *Maréchal Niel*, *Charles Lefebvre*, *Senateur Vaisse*, *Sueur des Anges*, *Celine Forestier*, *Souvenir de la Malmaison*, *Devonianaum*, *Triomphe de Rennes*, *Madame Knorr*, *Duke of Wellington*, *John Hopper*. It showed clearly by the healthy foliage and size of the blooms that his growth on the Manetti fully answered all the purposes of autumnal blooming, and bears out all that he has said in its favour.

FINEER HOLLAND Hollyhocks than those exhibited by the Rev. Edward Hawke it is impossible to conceive. He outdid himself, and has carried the growth of this stately flower to a degree of perfection at one time considered impossible. His varieties were *Rev. J. Dix*, *Glory*, *Desdemona*, *Dean*, *Senior Wrangler*, *Charmar*, *George Keith*, *Favourite*, *Mrs. Downie*, and several seedlings.

Mr. C. J. Perry's *Verbenas* fully maintained the reputation he has already acquired in this flower, an immense distance being noticeable between his stands and those of any of his competitors. Particularly noticeable amongst his flowers were *Miss Turner*, *Hercules*, *Thomas Harris*, *Glowworm*, *Cleopatra*, *Meteor*, *Mrs. Ward*, *Samuel Moreton*, *Firefly*, *Prince of Wales*, *Stardler*, *Leah*, *Madame H. Stenger*, *Harry Law*, *Mrs. Mole*, *Rose Imperial*.

As I have already said, the Gladioli were not so good as usual; but

it was fully a fortnight too late for them, especially after such a forcing month as we had in the month of August. However, it would have been difficult to have surpassed the fine stand exhibited by Messrs. Kelway & Sons. Of these the finest were Leonardo da Vinci, Madame Rabourdin, Marie Dumortier, Le Danté, Lord Byron, Rose Superbe, Gem of the Ocean, Mirabilis, Felician David, and Prince of Wales. Messrs. Bunyard, of Ashford, exhibited a nice collection, taking the second prize, in which were some new flowers, although the spikes were hardly so large as Messrs. Kelway's and were too much crowded in the box. Amongst them were Bernard Palissy, Newton, Le Danté, Madame Furtado, Lady Franklin, Molière, Belle Gabrielle, Rev. M. Berkeley, Meteor, Emperor Napoleon, Othello, Hebe. Amongst amateurs, Mr. Sladden, of Ash, was a long way ahead with a box containing sixteen of his new seedlings, Acidalie, Madame de Sevigne, John Bull, Leonardo da Vinci, Fulton, Le Danté, and other fine flowers. Messrs. Kelway exhibited a large collection, as did also Messrs. Banyard, and the former gentlemen had some good seedlings, to which certificates were awarded, one being the very ditto of Newton, the other of Madame de Sevigne.

Of Dahlias Mr. Keynes was first in the class for Nurserymen. His flowers were Vice President, Grand Sultan, Ruby Queen, Harry, Annie Keynes, Mrs. Boshell, Arthur, Thomas Backhouse, Mrs. Thomas Hill, Lord Palmerston, Lady Jane Ellis, Lilac Queen, Peri, Lord Derby, Snowball, Hugh Miller, Miss Sarah Turner, Miss Herbert, George Wheeler, Golden Drop, Juna, Matilda Keynes, George White, Charmer, Lord Lyons, Delicate, Jenny Austin, Croton, Prince of Wales, Mrs. Wyndham, Miss Horton, Sir George Douglas, Charlotte Dorling, James Backhouse, Bob Ridley, Mrs. Boston, Princess Mary, Golden Gem, Donald Beaton, Leah, Lady Derby, Flossy Gill, Harriett Tetterell, Caroline Tetterell, Lightning, Seedling, Baron Taunton, Lotty Atkins. I have not time to particularise the other stands, and must refer to the prize lists, which will appear next week, but never has a finer collection of Dahlias been exhibited. There were also fine seedlings both in Dahlias and Verbenas.

One of the most attractive features of the Autumn Show is the collection of cut stove and greenhouse flowers. Some fine boxes of these were exhibited and attracted great attention. Nor must I omit the glorious stands of *Maréchal Niel*, furnished by Messrs. Paul & Son and Mr. Keynes, nor the fine stages of ornamental plants from Messrs. Carter & Co., and Messrs. Downie, Laird, & Laing. Altogether I have to congratulate the Company and their efficient Secretary, Mr. Wilkinson, who (as usual), did everything in his power to contribute to the comfort of all concerned in the great success which has attended this Show, and hope it may prove remunerative.—D., *Deal*.

HOW TO KILL THE PEAR SCALE.

BLESS me! What could induce you to publish that tremendous receipt for killing not the scale only, but gardeners also, in your last number, page 182? Picture to yourself the gardener's face growing longer and longer as he reads that "he is to unnaill the scale-infested tree, scrub it all over two or three times, next wash it with a solution of soft soap, then dress it all over with a nasty composition, working it into every hole, angle, or crevice." None but a man in command of an army of painters as well as sub-gardeners could attempt to execute such a formidable receipt.

Try the following plan. Paint the tree all over with pure boiled linseed oil in January or February; avoid oiling the bloom-buds if you can—it is, however, of no great moment. This is a thoroughly efficient measure, and comparatively easy of execution. No erratic scale will crawl upon the polished branches. My gardener had seen this method employed years ago with great success, and he persuaded me to allow him to make a trial of it. I said the oil would smother the tree. He said the tree would rather like it than otherwise. Two upright-trained Pear trees on the Quince stock were operated on in February last. One tree had only the lower portion of the cordons oiled, the upper part being coated with the usual horrid composition; the other tree was oiled all over. When I saw it shining like polished mahogany I thought it was indeed all over with it. At this moment both the trees thus operated upon are in better health than they have shown for years. One is bearing an excellent crop of fruit, the other is more luxuriant than is consistent with fruitfulness; but it is "all over" with the scale.—C. I. M.

TEA AND NOISSETTE ROSES.

A CORRESPONDENT asks, in reference to my statement that I include *Maréchal Niel*, *Gloire de Dijon*, and *Celine Forestier* amongst Noisettes, whether *Gloire de Dijon* has not a Tea scent, and if, therefore, it is not a Tea Rose, what is it? To answer this we must begin at the beginning. The Noisette Rose is so called from the original Rose having been raised by a Mons.

Noisette in America, and sent to his brother in Paris in 1817. It was raised from the old Musk Rose and the common China Rose. Since then this Rose has been largely hybridised with the Tea-scented Roses, and the produce may be called Tea-scented Noisettes, as, indeed, our first authority on the Rose, Mr. Rivers, long ago called them. The habit of these Roses is more rambling than the Tea *pur et simple*, and the foliage is more robust; but still the Tea scent is there. Any one can see, I think, that there is a great difference between the growth of such a Rose as *Gloire de Dijon* and *Niphetos*, *Maurin*, *Adam*, or any of the genuine Teas. The Tea-scented Rose is a China Rose, and was, in its original condition as a blush Rose, simply a variety of the old well-known flower. It was then crossed with the yellow China, and the result has been the many and beautiful varieties of Tea Roses we now possess.

I hope the above may satisfy your correspondent; but if not, I would refer him to Mr. Rivers's "Rose Amateur's Guide," where he will get plenty of good, solid, practical information, without any quasi-philosophical twaddle or affected classicism, but the experience of a long life spent in cultivating this favourite flower.—D., *Deal*.

APRICOT CULTURE.

(Concluded from page 141.)

Is the case of trees trained to a hot wall, in addition to the blossoms of the trees being protected by nets or canvas, as already described, a moderate fire may be kindled and kept going when the nights are severe, but under no circumstances should a strong fire be made, as the heating of the wall beyond making it warm is more injurious than beneficial. A gentle fire during a night of severe frost may be the means of saving the crop from injury, but the violent heating of the wall may prove equally disastrous to the crop. With due care in not overheating, I have known hot walls answer admirably for Apricots, not only by preserving the blossoms and young fruit from frost, but by causing the earlier and better ripening of the fruit. A gentle fire kept going night and day, but more particularly during the day, will cause the fruit to ripen as well upon the side next the wall as on the side exposed to the sun, where it very often is quite soft and ripe, whilst hard and green on the side next the wall. A partial shade of thin netting when the fruit is ripening and the sun's rays powerful, will prevent the fruit on the exposed part from ripening so rapidly, and the side next the wall will have time to ripen equally with the exposed side. The netting will serve to keep off wasps, in addition to securing the better ripening of the fruit.

Earwigs and ants are very fond of the fruit. The first are best caught in traps for that purpose, and which may be obtained from nurserymen and seedsmen, or great numbers may be caught in the hollow of bean-stalks, these being cut into six-inch lengths and placed among the branches close to the wall. The hollow stems of the Sunflower, Jerusalem Artichoke, and *Heracleum giganteum*, cut into six-inch lengths, make excellent traps, which should be frequently examined, and the insects blown out into scalding water. With regard to ants, they are far more difficult to exterminate, but they may be kept from ascending the trees and walls by drawing a band of gas tar horizontally along the wall between the soil and the lowest branches, and around the stems of the trees. A band an inch broad will be sufficient. Across this the ants will not pass until the gas tar ceases to be offensive. It is necessary to renew the band in case of its becoming passable to the ants.

The borders in which Apricot trees are planted should have the surface neatly forked over in autumn (not going so deep as to injure the roots, or even disturb them), and the whole border should be covered with a top-dressing of rich compost or short littery manure an inch or two thick; but if of manure a depth of three inches will not be too much. In March the top-dressing may be neatly pointed in, and in case the roots are very near the surface, another top-dressing may be given, but not more than to half the thickness of the autumn top-dressing. In addition to the top-dressings, a good soaking of the soil with weak manure water will prove of great benefit to the trees during dry periods; but frequent waterings, inasmuch as they seldom are given in quantity to reach the lowest roots, are worse than useless and should be avoided. Two or three good waterings supplied during dry periods in May, June, July, or the early part of August will be of great benefit, contributing to the health of the trees and size of the fruit.

There are cases in which the trees blossom very freely, but rarely set more than a thin crop. It will usually be found that this occurs where the roots are buried deeply, which they often are in deep loamy soils. The subsoil in these instances is often deficient in moisture, for, however moist their surface, loamy soils that have not been properly trenched and rendered porous by an admixture of suitable materials, are seldom moistened throughout by rain or surface-waterings. It is well in such cases to throw the soil up in ridges in autumn as deeply as possible without interfering with the roots, the ridges running parallel with the wall. The subsoil may during the winter become moistened; but if, upon examination in March, the subsoil is still found dry, the hollows between the ridges should be thoroughly soaked with water and consequently the subsoil (the water as it is absorbed being renewed repeatedly until the subsoil has been thoroughly soaked). To effect this sooner holes may be made with a crowbar, but not deeper than 2 feet, as the roots will follow the direction of the crowbar-holes, and may go deeper into the soil than will be beneficial to the trees. The water used at this season may be that from a spring, as it will be higher in temperature than the atmosphere or ground, and its use at this early season will be beneficial; but the water used in summer should not be taken from a spring but be soft or rain water from an open cistern or pool. When the water has fairly settled from the surface, the ridges may be levelled, and a more healthy growth will follow.

Trees which are luxuriant and making much wood are not unfrequently severely attacked by mildew. This may be partially kept under by dusting the mildewed parts with flowers of sulphur; but the evil proceeds from the root, and to effect a thorough cure the trees should be taken up in autumn immediately the leaves turn yellow, replanting them after the border has been properly trenched and otherwise duly prepared. It is not desirable to remove very old trees but those of ten or twelve years' growth (notwithstanding that they cover the wall), may be removed with perfect safety, due attention being paid to the preservation of the roots and especially of the fibres.

Of diseases to which the Apricot is subject, one of the most frequent is the limbs dying off, whole branches occasionally perishing without any apparent cause, but upon examination it will be found that there has been on some part of the limb an exudation of gum or a rupture of the sap-vessels, resulting in their entire destruction; but what this is caused by remains one of the unsolved problems of horticultural science. I believe it to be solely attributable to the influence of the stock, usually that of the Muscle Plum, and I believe a great many stocks are raised from layers and not from the stone, as they in all cases ought to be; hence we have the trees upon them weak in growth and very liable to gumming, and partially dying.

A small green caterpillar (*Ditula* (*Pedisea*) *angustiorana*), does considerable mischief to the foliage by eating holes and twisting the leaves together, to form for itself a home. A good syringing with clear lime water will destroy it, but the best of all means to adopt is to search for the caterpillar in the evening and morning, and pick it off the leaves by hand. It folds itself up in a sort of nest by tying portions of the leaves together when it attains its full size, changing into a brown pupa, from which the moth emerges early in July. The insect should be sought for before it becomes developed into a moth and destroyed, for by doing so much subsequent trouble will be saved.—G. ABNEY.

FLAVOUR OF FRUIT.

I PERFECTLY coincide with Mr. W. Thomson's opinion, that flavour ought to be the principal aim in Grapes and in all kinds of fruit.

From observation I think suitable soils must be the first and chief cause of flavour. Perhaps either Mr. Thomson or Mr. Rivers would say something on this point.

Gentlemen of correct taste, who do not exhibit, will no doubt always require a good-flavoured fruit as indispensable. Of course they will require a gardener also to finish off his fruit handsome for table. Some years ago Mr. Fleming was showing me the gardens at Trentham Hall, of which he had at that time the direction, and he pointed out that all his fruit trees were in brick basins; for although the natural soil was deep and apparently good, it was not suitable for producing flavour in fruit.

Another instance has come under my observation. I have

two friends, one in Staffordshire and the other in Worcestershire. The former keeps a skilful gardener, but all his fruit (Apples, Pears, Plums, Damsons, Walnuts, Cob Nuts, and Filberts), are not worth eating as compared with the same sorts grown by my Worcestershire friend, who has no regular gardener; yet the Brassica tribe in Staffordshire are the best-flavoured I ever ate. Any light thrown on these points would be valuable, as most kinds of fruits might be grown in artificial soils.—A FRUIT-EATER.

MASTER AND GARDENER.

"If a master does not know when he is well served it is fit he did. I shall not stay here. I shall give notice." So said Mark Granton as he sat down to tea one entry evening in August.

"You would not leave in the height of the season, when there is so much to do—so much that would go wrong if you were not here to direct?" said his wife.

"That would be nothing to me then. I was engaged at a month's notice, and I shall give it, and leave."

"But we have such a comfortable house, and the children are never in the way, and they have grown quite fat, playing in the field there, safe from harm!"

"Well, I suppose there are other houses quite as comfortable as this, and children can play anywhere. I'll tell you what, Mary, if I have a score lads I will not make one of them a gardener; it is the most thankless work a man devotes himself to. It is, 'Come here,' and 'Go there;' 'Do this,' and 'Do that;' 'Why was this thing done, and the other thing left undone?'"

"You are tired out, Mark, with the heat; it will not look so bad to-morrow."

"It is generally bad at these big places at this time of the year. The work is always ahead, do the very best one can; a score things wanting doing at once, and it would puzzle a Sir Joseph Paxton's head to know which to do first. I declare, if a man had half-a-dozen pair of hands instead of one, and worked from sunrise to sunset, something or other would stare him in the face on the Sunday morning, saying, 'Come, do me.' And the worst is, there is a great deal of labour which makes no show of having been done, and yet it must be done, and that, too, within a given time, or the result is bad."

"Something like a woman's work, of little importance in the doing, and yet if it is not done all goes wrong."

"I do not know about that; but I know there is often little to see for all the labour; and I often feel at night like the lazy man uncle used to tell about, who worked all day under a bracken, and it could not be found out what he had done. It makes a difference if you are serving a master who understands what you are doing, from having done a little that way himself."

"And yet I have heard you say that many gardeners do not like going where the owner understands gardening."

"Neither do they as a rule. There are reasons why they should not, and yet they could have no influence over a man up to his work and willing to do it. For my own part I would rather have a master who knew what I was doing; for then, though he might find out the easy idle days, he would also know of the hard ones. And after all, growing flowers, in-doors or out, in this cold, wet, windy, disappointing climate of England, is not play; its ditty is the same as poor Hood's song, 'Work, work.' I wish I had been a nail-maker or a cloth-drawer—anything in the world obliged to begin and end at a fixed time. But after this, when I change, I will be 'to-a-minute-man.' Why, there is Robert Thorp, up at Clayton, they say he never stops a minute after the lodge clock strikes six. If he is watering, and his can be half empty, he does not stay to finish, but turns all out at once, and is off."

"I do not admire him in the least," replied the wife. "He cannot care much for his plants; has not much pride in them, or he could not do so; there would be times when they would suffer if he did. And then, too, if he leaves to the minute he must also be there to the minute, or he would be robbing his master."

"Of course he must; no great hardship in that."

"I do not know. We thought it rather hard when we lived in Manchester, and had to pay 3d. a-week to a knocker-up."

"Habit is second nature; we should soon have learned to get up at the right time. And as to being fond of plants, where is the use? they are not our own, only ours to make

grow. Why, at Thornton they have turned away a good gardener for giving a few cut flowers to his mother."

"That was not fair; for to give a few flowers is a privilege every gardener has possessed ever since I knew anything about the matter, and my father and grandfather were gardeners."

"But everything is altered since that time. They were Utopian days in which our grandfathers dug; days of quiet, easy gardening, with a long winter, in which they did little or nothing—indeed, fancied they could do nothing. Imagine us now at our time, and with our requirements, taking off all the lights from every pit and frame, and putting them under cover for the winter. Why, our winters are almost as busy as their summers used to be."

"Yes; I wonder, Mark, what they would think if they could see the Cucumbers and snowy white Cauliflowers we have at Christmas, and the long bright sticks of Rhubarb, red as a Cherry, they used to think so much of if they could have by May-day."

"Now, Mary, you would think it wrong of a gardener to give away Cucumbers and vegetables without consent; and yet the masters argue they are no more his—that is, that flowers are no more the gardener's than fruit or vegetables; and legally they are not his, he neither buys the seed nor rents the ground on which they grow."

"And yet custom or courtesy have ever acknowledged the gardener's right to cut flowers when and where he chose, presupposing he knew best. I am sure I should not stay a month if the right was withheld me. And your comparison is not good, for fruit and vegetables are food, and have a certain value; but flowers fade by to-morrow, and are useless."

"And perhaps you do not know that flowers have come to have a certain value—that is, a market value. Large hampers of flowers, packed in moss or damp grass, are sent by rail weekly from London to the great towns in the north, and find there a ready sale. So that after all they have a certain value of their own."

"But the flowers you speak of are grown for sale by nurserymen or people who have small gardens of their own; and that has nothing to do with a gardener having the right to cut a few flowers for his friends."

"You do it whenever you like."

"Yes, but I agreed for it, and it was given me most liberally. And if all gardeners would look upon their engagements as a mere matter of business, and put sentiment, fondness for flowers, and such like nonsense out of their heads, they would not make so many mistakes."

"I think, Mark, you met an east wind as you came."

"No, I did not; but I got put out greatly. You know we have had a busy time of it this season with the new borders making (and perhaps the houses are not in as good order as they should be); and master coming in this afternoon says, 'The plants over yonder at Sykes's are in much better condition than ours. You could not find thrips running the mad gambols they do on these Azaleas.' I was near to saying their place is less than ours, and they keep a man more, but I did not, for I hate grumbling; so I said, 'He is a tobacco manufacturer, and one pound of tobacco would go farther in his houses than three in ours.' 'You could still smoke,' says he, 'your bills get paid.' 'Well, I should have done so,' I said sharply, for I felt cross; 'but I was afraid of spoiling the young stuff in the house at present.' 'Oh, indeed!' he replied, 'why did you not wash them down?' At the Five Poplars they never smoke the year round, but wash them down with Gishurst and a painter's brush.' 'Wash them!' I said; then, for fear of a larger dose than I could swallow, said it was tea-time, and came home. Now, Mary, if he had understood anything about gardening, had any practical knowledge of plant-culture, with such houses as his are, and so full as he will have them (he will find out the ruinous practice of overcrowding some day to his loss), he would never have said anything half so absurd as to wash thrips off the leaves of Azaleas with a painter's brush. Why, the little black things would run up among the bristles and come down at their leisure in search of better quarters; and then the time it would take! I wonder if he would hire the village school, or the old women from the Union. No, I shall never come to that; I will be a rolling stone first, changing ever. It is bad enough to have Camellias to wash three or four times in the year with soap, making one's hands feel as if they had been out charring, and yet they must be done, or they are not fit to be seen; but then the leaves are large and smooth, and a sponge over does wonders."

"But he would never think of your doing it, Mark."

"No, but he would expect your husband to consider himself responsible, and I might just as well do it as stand over some one, wasting my time while they did it, and probably have my patience sorely tried in at the bargain. Now the idea of setting such a lad as Smith to wash away thrips from Azaleas, ten to one he would knock off half the buds, and never know the mischief he had done. And Robert is not much better. Why the day we went to Liverpool, I told him to gather some Peas for the ball, and to do it carefully, so as not to spoil the whole lot by putting in those too old. Well, he pulled more empty newly-formed pods than full ones, and his peck of Peas when shelled did not fill a breakfast cup. I dare say he was watching the thrushes and the ripening Cherries, and wondering which would have the best of it."

"Well, I do not know what to say, Mark, but it seems to me there might be worse things to do, or to put up with, than washing away thrips from greenhouse plants, and a man with a young family should try to get a bit of moss on his rolling stone."

"Well, well, Mary, I must go or Miss Claude will miss her bouquet for to-night's ball, and if there are any thrips dancing about they will show off splendidly on her satin dress."

"Well, you know best, Walter, at least you think you do," said Mrs. Stapleton, of The Elma; "it is a foolish custom or rule, or whatever you may choose to name it. I do not approve of it; would not submit to it. You pay hundreds a-year to your gardeners, you grow the rarest, most costly flowers, your hothouses are the boast of the county, you do all this not for your own pleasure, or the gratification of your family. Do not make any mistake about it, I pray you, it is just for your gardeners, they hold the keys, and bow one in and out, and say this must be cut, and the other not cut. Yet your wife may not dare to pluck a few buds even."

"Ah! you do well to say buds, for that last Camellia you took had three fine green buds on, and two years' growth of wood, and the wood growing in a place where it was much wanted to make a fine specimen plant."

"I suppose it will grow again."

"Yes, but never as it would have done if you had left on that strong healthy young shoot. Butler was finely put out."

"Indeed! I heard him say he would rather I had cut down the entire plant; but it is always the same, whatever I take is something I should not have done. There are thousands of flowers growing out on the borders before the windows, burning in the sunshine, or dying in the rain, and if I dare to gather any of them, I am spoiling the appearance of the beds, lessening the depth of colour where it should be deepest. I tell you what, Walter, the Curate's wife down in the village with her plot of garden she can manage herself, and do what she wills with, even to the cutting away of a few green buds, is richer than your wife."

"I hope she is more judicious, Margaret, for the flower you are wearing in your hair cost guineas, and this is our first year of blooming it. And I half fancy you took it yourself, though you are too timid to pluck a Verbena. I am quite sure Butler would not have cut it, and he allows no one to do anything in the Orchid-house without his permission. It was to have been sent to the show next week."

"I am sorry I took it, then."

"You are like most women, hard to please. You have fresh flowers brought in for you every day in the year. They are on your breakfast-table, on your dinner-table, and in your drawing-room. They are in the hall and in the lobby windows. They come to you without cost or trouble in any way, and yet you would have more."

"I would have the pleasure of gathering for myself, of doing as I like with what is or ought to be my own. I cannot, I never could, understand why a gardener should cut flowers and his master not. It was the same at my father's, it is the same go where you will."

"It is very easy to understand if you look at it from a gardener's point of view. These plants are in his care, the result of his labour, proof of his skill, and he must naturally lose all heart, all interest in their growth, if they are mutilated at the fancy of another. I never yet met with a gardener worth a rush, who would submit willingly to the indiscreet clipping, even of a lady."

"It may be a rule, it is still a bad one, and were I a gentleman employing gardeners I would put it at defiance."

"You would soon find out that you were doing more injury to yourself and your house than to any one else. For if the

gardener found it difficult to do without you, believe me you would find it utterly impossible to do without the gardener."

"I may have to submit to the rule, but that will not make me acknowledge its propriety."—MAUN.

MILDEW ON GRAPES.

I do not believe that mildew attacks Grapes owing to the state of the roots (though so affirmed at page 139), but I rather think it is induced by the state of the atmosphere. We learn that in Vine countries mildew is of recent years unusually destructive, though the roots receive the same management as they have for centuries.

I will state a few facts bearing on the subject. In 1856 I planted here (in Surbiton, Surrey), a small Vine of the Sweetwater variety, to cover a stable wall. This Vine now covers 40 square feet of wall, the longest shoot is 76 feet long. The foundation of the wall is 11 feet below the surface, in a sandy soil. Every year the Grapes of this Vine were preferred to Grapes from the vineery. It was never mildewed, although we were troubled with mildew during the last ten years. But this year mildew attacked this healthy Vine in June, yet the tree is most vigorous.

I manage five Sweetwater Vines on a wall 20 feet high. For the last five years every one of the five trees was mildewed, but this year only five bunches are mildewed, although the mildew is unusually bad in Surbiton.

I planted a small lean-to vineery here seven years ago. It is very damp, and the mildew has appeared for the last seven years in June. Last winter I did not wash the Vines as usual, now I am glad to state that not a particle of mildew has appeared as yet, although the Grapes are seldom dry till twelve o'clock daily. The fire is never lighted in this vineery till the frost is severe. The border for the Vine roots is a stiff loam, nearly as cold as clay, and exposed to all weathers.

Now, how can I suppose that cold root-action is the cause of mildew?—JOHN ROSS.

DR. DE BRIOU'S PAINT—SPENCE'S HEAT-RETAINING COMPOUND.

DR. DE BRIOU, of Paris, has succeeded in producing an enamel paint made from indianrubber, which though of film-like consistency, when applied to iron renders it absolutely proof against atmospheric action. The rapid radiation of heat from unprotected cylindrical boilers, &c., where heat is not required, has led to several inquiries being made through the columns of the Journal as to the best mode of covering them.

MR. SPENCE, late of Portsmouth Dockyard, has devised a composition which successfully resists the heat in the pipes of blast-furnaces 1000°. It is readily applied to plain, concave, or convex surfaces. It adheres to the surface as if it were part of the iron. The economy of fuel resulting from the use of the composition is estimated by the inventor at 20 per cent. Any information respecting either of the above compositions would greatly oblige.—F. FLITTON.

HOW I HAVE EDUCATED MY FRUIT TASTE.

My wife and I have not agreed very well together about the merits of certain fruits. The fact is, I despise a mean taste. I like that which is elegant and refined. Mrs. P. is all you could wish in the drawing room, and it puzzles me that she doesn't seem to have the same high-toned ideas in the kitchen. You know (I suppose you do, as by a reference in your last number I see you also are a married man), that there will be quarrels in the best regulated system of married life, and our first quarrel was over some wretched Albany seedling Strawberries. Her mother's garden grew them, and she brought me a few hundred to plant in ours. I had not had much experience in gardening, but marrying into a suburban family I concluded to start into a little gardening and matrimony together. I subscribed to the *Horticulturist*, and in a number of that periodical learned that the public taste was being degraded by mean fruits, and that it was the duty of all who had refined ideas of what was good to educate the vulgar crowd to a knowledge of what was best for them. Among Strawberries the Albany was particularly marked: "a hog would not eat it," said the Editor. I was little astonished at my wife bringing

me such things. I did not like to plant them, nor to remonstrate either, seeing as we hadn't been married long. I had been taught by select paragraphs in the newspapers that everything was in knowing how to manage a wife. I thought I could manage this thing pretty well, and this was what I done. Looking over a Patent Office report I saw a magnificent coloured plate of a magnificent kind, the Peabody seedling, which according to the account given by the government officials was to be the all-to-be-desired in this delicious fruit. I sent away twenty dollars for Peabody plants, and when they came threw away the Albany, trusting my wife would never know the difference, and that I should not have to blush when our friends stayed to tea for setting such vulgar things as Albany before them. But alas! When the time for fruit came around the pesky things didn't bear any worth speaking of, and my wife "could not understand it." "Dear," says she one evening, looking suspiciously at the bed, "I think there must be some mistake here. These can't be the Wilson. They always bore, and yet how can it be else, for I dug up the plants myself and gave you?" "It is queer," says I, reddening a little. "Meehan [Editor of *American Gardener's Monthly*] says (I had just been reading an old Agricultural paper) Strawberries will run into all sorts of kinds." "Meehan! fiddle-sticks!" says she, "who's he?" They never ran about that way in our garden."

I never heard her talk so commonplace before, and was about to reply in good style, when she picked up a small berry and said with vehemence, "I believe there has been another kind planted. We always have hard work to get the 'bull' off the Albany; with this thing's long neck the 'hull' can hardly be made to stick on." I did not know as much as she, and I began to feel it, and as I had taken your name in vain to save me, and that didn't do, I thought best to tell her all! Well, if you ever saw such a storm! For the attempted deception I believe I have never been truly forgiven, but I plead so hard about "educating the public taste," that I think it consoled her for the loss of Strawberries that year. On the main point, however, I made up my mind not to give in. I have since been buying all the new kinds as they have severally been brought forward to "educate the public taste," but somehow we don't get many fruit, and my wife says it is hard she cannot have plenty of Strawberries, as her mother always has in her garden; I think it is hard also, but yet I think in view of the immense advantages to the public of maintaining a high standard of public taste, better do without Strawberries altogether than encourage such vile things as the Wilson Strawberry.

Of course I went into Grape-growing. Canadian Chief, Brinckle, Rebecca, Delaware, Clara, and some others, came strongly recommended by the educators of public taste. I sent a draft for one hundred dollars, up the Hudson, so as to be sure to get the "genuine thing." My wife asked me to add Concord, but I showed her the report of a committee who went to Boston to see it, and the members had all caught the diphtheria by eating the berries; I also pointed out that the Editor of the *Horticulturist* had vetoed it; that Iona Island, the centre of Grape knowledge, had "pronounced" against it; and indeed no one but that little fellow Freas, of the *Germantown Telegraph*, had said a word in its favour. This last brought on another storm, for I did not know that she thought so much of Freas. "His 'household department' was the best thing a-going; she had had the paper since she could read and always would, and she had seen more fruit in his garden in one year than she feared she would ever see in mine." I did not like "mine" instead of ours, but I swallowed that. The end was I agreed to let her have Concord to put about the house, over the pump, and along the back fences. She has plenty of fruit such as it is, as Mr. Mead happily expresses it in your review, but "one remove above a fox Grape." But, although I had to wait five years before I got a Delaware bunch, and it has not yet done near as well as I know it will after age gives strength to the Vine, and, although the others have died out altogether, I would not give one bunch of Delaware for ten thousand pound weight of Concord, and I am sure the educated tastes of your readers will agree with me.

So we have gone on for about ten years, wife and I. She is an excellent housekeeper. Though so deficient in the refined taste for good fruits, she manages to have the table always filled with good things prepared in some way; but as she knows my hostility to the vulgar varieties of fruits, I am sure she uses none of them. In the garden I only gave way to her in one single thing. After long coaxing I agreed to plant fifty Philadelphia Raspberries two years ago. I hated to give the price I did for them, especially as it was boldly announced that

it was a fruit only fit for the "million;" but I had persevered year in and year out with my Brinckles, Allens, Hornets, Fill-baskets and so on; tried sawdust, tan, long pruning, short pruning, pegging down, tying up, and every contrary thing, and I really thought the basket required to be filled was rather too small, and the only Hornet was in the house (Mr. Editor, please send this number to my store instead of my private residence if you print this sentence). But I yet have hopes; but to satisfy her, I bought fifty, but you may guess I took no care of them, never hoed them, and let them grow as they chose. I put them in a part of the garden near the rubbish, and indeed had forgotten all about them. And now comes the curious part of my story, for a week past we have had Raspberries all over the house, and supposing my wife bought them in the market I kept praising their good qualities, for they were good, and to-day she tells me they are from those fifty plants "behind the barn."

But I am not going to give it up so. I am sure Mr. Parry must have sent us something else for the true Philadelphia. He himself has assented to this not being quite so good in quality as some others, but as my taste is an "educated one," and this one is "good enough for me," I am sure it is new, and I shall make a new plantation of it next year.—PERCIVAL PINKERTON (*American Gardener's Monthly*).

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

COLAX JUGOSUS (Furrow-lipped Colax).—*Nat. ord.*, Orchidaceæ. *Limn.*, Gynandria Monandria. Native of Brazil, introduced by Messrs. Loddiges. Flowers white, crossed with dark purple bars.—(*Bot. Mag.*, t. 5661.)

DRACENA SURCULOSA, var. **MACULATA** (Spotted-leaved Long-shooting Dracena).—*Nat. ord.*, Asparagineæ. *Limn.*, Hexandria Monogynia. Found by Mr. G. Mann on the banks of the Old Calabar River. Flowers pale straw colour. Leaves yellow-spotted.—(*Ibid.*, t. 5662.)

BEGONIA VEITCHII (Veitch's Begonia).—*Nat. ord.*, Begoniaceæ. *Limn.*, Monœcia Polyandria. This is the handsomest and most showy of the Begonias. Found by Mr. Pearce, collector for Messrs. Veitch, near Cuzco, in Peru. "With the habit of *Saxifraga ciliata*, immense flowers of a vivid vermilion-cinnabar red, that no colourist can reproduce, it adds the novel feature of being hardy, in certain parts of England at any rate, if not in all. It was discovered at an elevation of 12,000 to 12,500 feet, and the plants grown in Mr. Veitch's establishments have already given proof sufficient of their hardihood, by withstanding a temperature of 25° Fahr. with absolute impunity. Unwilling as I am," says Dr. Hooker, "to pronounce on the probable or possible adaptation of exotic plants to an English climate, I cannot but believe that in the south-western counties and in the south of Ireland, the *Begonia Veitchii* will certainly prove one of the most ornamental of border plants."—(*Ibid.*, t. 5663.)

EPIDENDRUM BRASSAVOLÆ (Brassavola-like Epidendrum).—*Nat. ord.*, Orchidaceæ. *Limn.*, Gynandria Monandria. Discovered by the late Mr. Skinner on the mountains of Guatemala. Flowers brownish yellow; lip, upper half straw colour, lower half mauve.—(*Ibid.*, t. 5664.)

ERODIUM MACRADENIUM (Spotted-flowered Storksbill).—*Nat. ord.*, Geraniaceæ. *Limn.*, Monadelphia Pentandria. Native of the Pyrenees. Two upper petals light purple, with deep purple horseshoe spot and purple-veined; three lower petals pale purple, with darker purple veins.—(*Ibid.*, t. 5665.)

GRIFFINIA BLUMENAVIA (Dr. Blumenau's Griffinia).—*Nat. ord.*, Amaryllidaceæ. *Limn.*, Hexandria Monogynia. "A very charming tropical bulbous plant, discovered by Dr. Blumenau at St. Catherine's, Brazil, and sent by him to the Berlin Botanic Gardens. It is advertised by Messrs. Haage & Schmidt in their catalogue for 1867, and the Royal Gardens, Kew, are indebted to Messrs. E. G. Henderson & Son for specimens which flowered in April of the present year." Flowers white, streaked with crimson.—(*Ibid.*, t. 5666.)

HYACINTH Prince Albert Victor.—"Until recently our best dark red Hyacinths were feeble in spike, producing small, narrow, and crumpled bells, bearing no comparison in size and form with the best light reds, blues, and whites. It is with satisfaction, therefore, that we hail in Prince Albert Victor a deep red flower, which is so marked an improvement in these respects. The habit and growth of spike is that of Von Schiller, which in this point has hitherto stood in advance of all others, and

the colour is a rich dark shining crimson. The spike is decidedly longer and broader than that of any deep red Hyacinth; the bells, too, are of good shape, and very close on the spike. The root is round and handsome, and equally suitable for pots or glasses. The best of the old deep reds are Amy, Lina, and Mille Rachel; of the new ones, Garibaldi, Linnaeus, Reine des Jacinthes, and Vuurbaak; but Prince Albert Victor is in advance of all these, and will doubtless eventually figure in every choice collection of these beautiful spring flowers. Our drawing was taken from a spike grown and furnished by Mr. William Paul, of Waltham Cross, who exhibited specimens before the Royal Horticultural and Royal Botanic Societies of London in the spring of the year, and by the former a first-class certificate was awarded. It is uncertain at what date this flower will be offered to the public. It is at present exclusively in the hands of the raiser, and the slow process of multiplying the Hyacinth will, probably, prevent its distribution from taking place for at least two years, and even then the number of roots to be disposed of will be limited. It takes four years to flower a Hyacinth from seed, and when found to be worth multiplying, another four years before good flowering roots can be brought into the market."—(*Florist and Pomologist*, vi., 189.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

Asparagus, if any of the beds are withering and ground is scarce, cut them over if quite yellow, and plant a row or two of Endive and Lettuce for late use. *Cabbages*, young plants just through the ground should have a little soil thrown through their stems, if intended to remain where sown. *Endive*, blanch. There are various well-known modes of doing this. The Spanish method of blanching is generally performed by pressing the heart of the plant gently down, on which a fragment of tile is laid, over this a light covering of earth is sifted. The fringed edges of the leaves are carefully freed from earth and exposed to light (having small bits of tile laid over that portion of soil from whence they protrude), to render the blanching perfect, and produce what gardeners particularly pride themselves in—viz., a plant of Endive white all over, excepting the edges of the outer leaves, which should show about 2 inches of green. *Herbs*, all, if not gathered, should be cut immediately. Quick drying is proved to be the best mode, for the same reasons that quick haymaking exceeds a lingering process. The *Sweet Basil* should be bunched and hung in a hot kitchen, also the *Sweet Marjoram*. When thoroughly dry let them be immediately packed close in boxes, so as to exclude all air; indeed, bottled herbs sealed up after such a course of treatment are very superior.

FRUIT GARDEN.

Gathering the various kinds of fruit as they become fit will be for some time the principal occupation in the fruit garden. The skins of Apples and Pears should not be rubbed, for they are covered with a sort of bloom, although not so conspicuously as those of the Plum and Grape; yet it does exist, and should not be displaced, as it prevents moisture from soaking into the skin. The common varieties of Apples and Pears may be stored in heaps and covered with kiln-dried straw, but the choice kinds of Pears should be carefully placed in close drawers made of non-resinous wood. Peaches and Nectarines are generally packed for carriage much too loosely for fear of bruising; the consequence is, that they jostle against each other during the journey, each giving and receiving a thousand concussions, which may, indeed, be very slight, but ultimately the effects are too evident. Therefore, after packing these fruits, shake the box or basket, and observe if the whole appear as fixtures, if any do not, plug them more securely with cotton wadding.

FLOWER GARDEN.

Neapolitan Violets which were parted and planted out in spring, should now be carefully taken up with good balls and removed to a frame or pit for flowering during winter. The soil most suitable for them is well-rotted turf, but if that cannot be procured, equal portions of leaf mould, sweepings of roads, and any light soil will answer. Late-planted beds and plants turned out into borders should now be occasionally watered. This should be done early in the morning, as the nights are getting cold. Sweet Peas, Dahlias, and other plants requiring tying-up should now be attended to before they are destroyed by wind. Climbers on walls should again be pruned and nailed if they require it. Prime Hollyhocks for seed

should have the decaying corolla plucked out. This helps the seeding much. Make observations on the colour and general character of the flower garden before the season closes in order to improve next year. After studying the individual effect of flowers, let collective effect receive a thorough consideration, and the important principles of proportion and outline as well as combination of colours have their full weight.

GREENHOUSE AND CONSERVATORY.

The sooner the *bulbs* are potted for forcing the better, more especially with regard to imported roots. The chief business is to get the root well established before growth commences, otherwise it is impossible to produce an early and strong bloom. Most of the failures we meet with are chargeable to the omission of this most important point, and the fault has not unfrequently been charged, most unjustly, on the bulbs. A soil composed principally of a mellow loam, with the addition of old cow-manure and leaf soil, and a sprinkling of sharp sand, and fine charcoal dust, will be excellent material. Secure good drainage, and pot the bulb high (three parts above the level of the rim), taking care that the soil is in a mellow state, neither wet nor dry. Shake the pot slightly, in order to prevent the bulb settling too low, but do not by any means press the soil. They succeed by far the best in a cold frame, and it is most desirable that they should receive no moisture beyond what the soil contains, until the pot is somewhat filled with roots. Those who have not the convenience of a frame may plunge them in cinder ashes in some sheltered spot, taking care to raise them above the ground level for fear of water lodging. Take care that there is a free passage for the rain, and let them be covered with 6 inches of some mellow material, such as old tan, old leaf soil, sawdust (if not too new), or ashes. This depth is necessary to keep out sharp frosts. Those put in water-glasses should be kept in a somewhat dark place until pretty well rooted, suffering the bulb to barely touch the water at first. *Heliotropes* to flower through the winter, and the *Scarlet Pelargonium*, should now be introduced to the greenhouse, and placed on a light, cool shelf. Autumn frosts may shortly be expected, and if such could be warded off by some means, most of these things would be better out of doors for another fortnight. Pot early *Cinerarias*, those taken in hand in due time will now be showing bloom, and will be very useful in prolonging the autumn display. Those who desire *Violets* in pots, should now pot their *Neapolitan*, and *Early Russian*, which were cultivated early for the purpose. This is the period also for planting a frame or pit of *Violets*; and if required to bloom through November and December, continuing until April, a little bottom heat is a desirable thing. It must, however, be of a moderate character, not exceeding by any means 75°. The plants to be planted with good balls of earth, and to receive a slight shading for a week after planting, after which they will require an abundance of air day and night, but no rain. *Pelargoniums* cut down a few weeks since, may now be disrooted, the soil shook entirely away, the roots slightly pruned and repotted in clean pots thoroughly drained. The *Anne Boleyn Pinks* for early forcing, if not potted, must be done forthwith. All these things for early forcing should at this period be strong and well established in their pots. *Primula sinensis* must be forwarded by frame protection, and the size of the pots increased; heat will not be necessary, but confinement in a frame will promote their growth, and secure their early flowering. Successions of *Mignonette*, for winter and spring use, should be sown every three or four weeks. Protect it from the weather in a common frame, keep it near the glass, and well thinned, leaving only six plants in a five-inch pot. *Roses* of the Tea-scented and Chinese kinds should also be placed under glass, and if requisite repot them, to promote immediate growth and early blooming.

STOVE.

Give regular attention to *Orchids*, in order to ascertain which have completed their season's growth, such should be instantly removed (more especially if any yellowness occur in the leaf), to a moderate house. Several of the *Bletias*, as well as the old *Phaius grandifolius*, are very useful for producing winter or early spring flowers. The *Maxillaria aromatica*, also, is an excellent early thing, provided the growth is early made and well matured. This principle, indeed, applies to all forcing matters.

PITS AND FRAMES.

Mignonette to come in in spring, should be thinned and pricked out into other pots, kept close and shaded for a few days. Cuttings of *Pelargoniums* should be occasionally looked over, picking off all leaves that exhibit a tendency to damp off.

Continue to put in cuttings of new and scarce plants; a close frame without artificial heat will answer to keep them in at present.—W. KEANE.

DOINGS OF THE LAST WEEK.

THE most of our work has been a mere continuation of that of the preceding week, considerable time being taken up in rendering lawns, flower-beds, and gravel as neat as possible to bear the inspection of visitors, as well as to escape the personal mortification of perceiving the untidy, day after day, staring one in the face. With every effort, however, as most gardens are now managed, there will be corners and places that cannot be reached in time, so as to have the whole demesne in first-rate order, and one of our old masters used to say, whilst making every effort to attain that result, when still failing to attain his object, "Well, on the whole it is just as well, for if our employers saw everything done they would suppose there was nothing to do." We have never in our course had any chance of arriving at that consummation, but when one desirable thing had been done, had always several more staring us in the face and requiring to be done. In such circumstances, Common Sense and Prudence would say, "See that all that comes principally under the eye is attended to first;" and hence in a gentleman's garden, all about and near the mansion should first receive attention, and every effort be made to have all neat, tidy, and comfortable, and enjoyable on a wet day, as well as a dry one. The state of the walks and lawns is, therefore, of primary importance.

Then, again, in a kitchen garden, if there are houses, these houses and the borders and walks near them, should always be neat and clean. A few large weeds in a distant quarter will not strike the eye so much as similar weeds near the houses, whilst such weeds inside the houses always convey the ideas of slovenliness and idleness. We shall never forget the impression made in a pretty well-kept place, from seeing large weeds disputing the post of honour with greenhouse plants in the plant-house. Unfortunately we walked into that greenhouse first, from a door in the boundary-wall, and we greatly regretted doing so, as the weeds there gave a sort of character to the whole place, as these weeds would rise up to our mind's eye when surveying fine crops and neat flower-beds. The simple lesson we would wish to inculcate is just this—If short of labour power (and that shortness cannot be altogether concealed), do not let it be seen in the most prominent places, as near the mansion, or in glass houses, &c. We think we once chronicled how a clever good gardener lost a good place, because on a necessary reduction of labour he allowed the reduction to appear prominently in a small flower garden near the house. He might have left uncropped the half of a large kitchen garden, or sown it in grass or grain. No one likes even to see the result of a reduction or deficiency thrust upon them, and much unpleasantness in such matters would be avoided, were it only thoroughly comprehended how much of pleasure, or the reverse, is obtained in a garden by the first impression made. No after-sights, especially in the case of short-time-staying visitors, will do away with the effects of that first impression. The proprietors and the managers of gardens should keep this in mind where there is much not quite up to the mark. If seen at all, these places should be seen after the senses have been well supplied with the beautiful and the interesting. One exception may be made in a place that is all thoroughly well kept, and the visitor has only time to look round; in that case it is often well to commence with the plainest and to end with the most artistic and highest kept, and in that case the last picture may be the most impressed on the mind. In small places it is as well that the best should be seen first and last likewise. The kind of day makes a great difference as to our sensations when looking on a flower garden. The same groups seem very different in a dull wet day to what they do in a bright sun, and even in the latter case the gardener will gain something if the visitor looks on the sunny bed whilst his own back and not his face is to the sun.

COTTAGE GARDENS.—Whilst in the autumn the gentleman's gardener must keep an eye to neatness and cleanliness, it is still more indispensable that the cottage gardener and the allotment gardener should do so. It is often very melancholy to contrast such gardens in spring and autumn. In the first time, all speaks of promise, and the fresh-turned soil, the neat borders, and clean walks are quite in unison with the season of the year—the expanding buds, the opening flowers, the skip-

pings of the lambskins, and the sweet music of the birds. But now how often all is changed! the Spirit of Melancholy too often broods over the scene. The decaying, rotting Pea-haulm, the diseased Potato tops—(sad matter for the cottage gardener)—taint the atmosphere; the winter greens struggle against weeds; the paths so trim in April and May are scarcely passable in September; and flowers once so nicely tended are left to the rough will of wind and rains, and, therefore, become repulsive instead of attractive. Excuses can, no doubt, be made; the head of the house, if an agriculturist, has, most likely, to work long hours to receive the extra money which helps to meet the rent-day, and he can do little in his garden; but children and helpmate might do something to keep down the weeds, which even in the pathway must be sadly in the way of the most modest crinoline. In harvest-time long hours can scarcely be avoided; but without interfering at all in these matters, believing that it is always the best when the employer and employed stand alone, with full powers on both sides to settle their own affairs, we may yet state our opinion, that for any continuance, long hours—we mean beyond from six to six—are a mistake, and will ultimately be no profit either to employer or employer. These long hours at present are a great drawback to the neatness of the cottage gardens of those engaged in agriculture. There is, however, something almost looked upon as a matter of course—that gardens should be left to themselves in the autumn, which is a great mistake, as a month or six weeks of neglect will lay up a storehouse of seed weeds for a number of years to come. The labourer has not even here himself wholly to blame. The farmer and the gentleman, unintentionally of course, help to increase the burden. We lately saw what was a pretty garden in May and June, overrun not so much with common weeds as with the common Thistle and the Sow Thistle, and the poor man said, "What can I do? Just look over that ere hedge;" and there were hundreds, if not thousands, of Thistles scattering their winged seeds, which might find no lodging-place on the sward, but would sow themselves liberally in the soft ground of our neighbours' gardens. It does surprise us that with all our improvements in agriculture, the great expense put out for artificial manures, the improved implements for cleaning the land from weeds, there should be such preserves in meadows, pastures, and hedgerows for insuring plenty of weeds in future for garden and field.

The chief circumstances, however, against trim gardens belonging to the agricultural classes in autumn is—first, the long hours of labour; and secondly, the similarity of the work in the garden to that in which they have been employed during the day. In such a case there is nothing of what may be called "rest in labour," which follows from a mere change of occupation and among fresh and different scenes. No wonder, then, that the garden of the mechanic and the artisan so often excels in cropping and in keeping the garden either of the agricultural or the gardening labourer. There is always the stimulus of feeling that we are working entirely for our own benefit, and not, as is generally the case, for the benefit of others as well as ourselves; for the true policy is whilst selfishness exists to appeal even to that selfishness, just as those regulations and laws that secure the best interests of all are better every way than the promptings of benevolence, which can look only on isolated cases. But beyond the stimulus of self-interest there is wanting in the case of farm labourers the stimulus that comes from a change of labour—such a stimulus as the carpenter, the bricklayer, the shoemaker, and the weaver experience, when leaving their usual work they can go for an hour or two into their garden. In their case the change of work is a sort of rest, gives them a peculiar pleasure, and, therefore, we may expect that at all times, and especially in the autumn, their gardens will be well tended. This matter should be kept in view in judging gardens and allotments.

It grieves us to learn that in most cottage gardens in this district the *Potato crop* that looked so promising has turned out a next-to-complete failure. The loss of so much food is a sad matter to the family of the cottager. Nothing can make up for the want of the Potato; but in future, prudence would say, Let more Parsnips, Carrots, Turnips, and Onions be grown, and at present fill as much ground as possible with Winter Greens and Cabbages, which will come in in winter and spring. It will take a large basket of the latter to make a good dish when boiled; but they are better than nothing, and for men who can stand them, and have to take a cold dinner in the fields, a good-sized Onion or two will alike give stimulus and

strength, and the aroma that might not be over-pleasant in a close parlour, will give no offence in the free, open atmosphere.

NEW MODE OF GETTING PUMP WELLS.—The other evening we met with a young pushing scientific farmer, who had witnessed this new mode of pumping up water in the east end of London, the invention of, and patented by, an American gentleman. The invention is applicable to any place where the water is at no greater distance from the surface than can be acted on by the weight of the atmosphere in a common pump. The tubes used are about 12 feet in length; but one and another can be added as required. Our friend gave us a particular account of the simple apparatus used, and was very sanguine as to its use in many parts of a farm at a distance from water, and where water was to be found near enough the surface, as the pipe or well is easily lifted when deemed necessary. In the case he witnessed, water from a depth of 24 feet was obtained in about three-quarters of an hour. The matter is noticed in the *Pall Mall Gazette* of the 7th of September, from which we take the following extract for the benefit of all concerned:—

"The inventor accompanied the Northern army during the late American war, and was instrumental in procuring by his method an unfailing supply of water for the troops. The well consists of an iron pipe 14 inch in diameter, and about 12 feet long, pointed at one end, and perforated with holes for about 16 inches from the pointed end. A moveable iron clamp is fitted round the pipe, and on the principle of pile-driving a 56 lb. hollow weight is raised and allowed to drop upon the clamp, and thus the pipe is driven into the ground." (Our friend states that a simple plummet is dropped into the tube to ascertain when water is reached, and, as stated above, if one tube is not enough a second or third is added, and when the moisture is found the pump is fixed on the tube.) We now add from the *Pall Mall*:—"The earth, sand, &c., that first enters into the pipe through the holes is pumped out, and then the larger pebbles, &c., form a natural filter around it. A well formed thus receives no surface-drainage, and the water yielded from it is always cool and fresh. No dirt is made in sinking the well, no accident is possible from foul air, or falling in of the sides, and the cost of sinking a well 15 feet deep is but £5. If rock is encountered in sinking, the operation is more tedious and expensive. A few days since a number of gentlemen assembled upon the cricket ground, Old Trafford, Manchester, to witness the sinking of one of these wells. Water was reached in five minutes from the commencement of the work, and in twenty-two minutes a depth of 10 feet had been pierced, the pump had been fitted to the top of the well (or tube), and a good flow of water had been obtained." Our friend told us that when the point of the tube was obstructed by a large boulder it was often best to begin again at a short distance. After the pumping out of the sand and earth the water came muddy at first, but soon came quite clear and fresh. We knew no end of cases where water is plentiful at common pump distance from the surface, and where the well is always when made a fruitful cause of worry and danger, especially in the case of children. This new invention in all such cases would be both economical and safe—no tumbling into the well.

FRUIT GARDEN.

Here the chief work has been looking after what was ripe, and protecting from and trapping natural enemies. Our bottles have not caught as many wasps and flies as usual—in fact, the wasps have not troubled us so much as large flies with blue abdomens. Singular enough, one open wide-mouthed bottle set near beehives, and supplied with stale beer and bruised decaying fruit, got densely filled with flies and a few wasps, not a bee had looked into it, though we feared they would, as sometimes they will attack fruit as well as wasps. We put up some hand-light traps in front of an orchard-house, and in the course of the first day thousands of flies were safely imprisoned. The traps are thus made: One hand-light with its top set on four bricks. At the highest part of the top a hole is made, on the top of this hand-light another one is placed, the open spaces between them stuffed with moss. Beneath the first light is placed a vessel with beer, sugared water, decayed fruit, &c. The insects go in to feed, and in the majority of cases they, instead of flying out, fly upwards, and after a while find the hole, get through into the upper glass, and there fly about until they die. We have taken more than half a bushel of dead wasps and flies out of one of such traps. The extra humane may lessen their struggles and their misery

by putting a brimstone match lighted beneath the lower glass, when the fumes will ascend and settle them quickly.

Apricots we have finished gathering. A few were rather hard on one side, but on the whole were in good condition and a good crop. We were afraid to leave those a little green on the side any longer.

Could we find time we would give an abundant watering to Nectarines, &c., on the open wall, as notwithstanding all the rains, we find that the ground about the roots is rather dry, and in such a case, in bright weather, the fruit is apt to drop prematurely before either it has received its full size or flavour. We commit an error in not giving plenty of water to such trees after the second swelling, and only withholding as soon as the trees approach ripening. The Nectarines we allude to are as yet as hard as stones, and will come in when most of those in the orchard-house have gone. Where too abundant for use, Nectarines make a fine preserve, only inferior to Apricots. Some people say, even superior to them, at any rate far superior to Peaches, which are too juicy for that purpose. We found some fine fruit were infested with ants, and, therefore, gave the trees a good syringing with weak clear lime water to get them from the wall, and then scattered some guano along the bottom of the wall, and then after a day a little soot and lime, and they have decamped. If on the outside and troublesome we should have brushed the bottom of the wall (after syringing), with tar, but this tarring will not do in-doors.

Red Spider.—We have more faith in sulphur water, sulphur fumes, soap water, &c., than our coadjutor Mr. T. Bréchant. We have found the sulphur water and clear soap water useful in late houses. In an early Peach-house the enemy appeared just as the fruit was ripening, and when we could not use the syringe, and chiefly on the front trees, where fumes of sulphur from the sun striking against an open part of the wall could not reach them. By the time the front fruit was gathered some of the leaves showed webs and clusters of the spiders. By syringing with sulphur and lime water as soon as the fruit of a tree was gathered we kept it from getting to the back trees until the fruit was becoming ripe, and when that was all gathered, a good syringing, even in the middle of the day, and shutting up the house in a bright sun, gave the trees and insects such a hot, moist vapour sulphur-bath as pretty well to send every trace of a living spider out of sight. This operation requires to be repeated, as, unfortunately, though it pretty well does for all that are alive, it will not injure the myriads of insects that will be hatched in future fine weather. It is often puzzling to think where all such enemies come from. Frequently in Peaches we never see a trace all the season of the red spider until the fruit is getting ripe, and then they will come, and if let alone they will soon have their own way. In all such cases prevention is better than cure, and one of the best preventives, we agree with Mr. Bréchant, is healthy vigorous growth. Even that growth with us will not always save us from red spiders at fruit-ripening time.

ORNAMENTAL DEPARTMENT.

We have already alluded to what we have been doing here, and lawns, walks, and beds have occupied a good portion of our time, and more especially as the damp season has caused many things to grow stronger than usual, and therefore required more attention in the way of support in our windy place. We can leave nothing without twig-bracing, whilst supporting is not at all needed in low, sheltered places. It makes a great difference when Hollyhocks and Dahlias, and the taller herbaceous plants are the only things that need bracing. The tender greenhouse plants must now be put under shelter, and Pelargoniums cut back should not be too wet. Much time has been taken up with cuttings. Heliotropes, Verbenas, &c., are doing well in a cold pit, and with very little shading at first. We shall take off more cuttings and place them in a spent hotbed, where there will be a very gentle heat. In this latter circumstance, in case of any insects, we shall pass all Verbena and other cuttings through weak tobacco water, and, if the least signs of mildew, through sulphur water too, holding the cuttings by their base and drawing the top through the liquid. This will save future trouble.—R. F.

TRADE CATALOGUES RECEIVED.

James Carter & Co.'s, High Holborn, *Gardeners' and Farmers' Vade Mecum*. Part 4: *Dutch and Cape Bulbs*.

Robert Parker, Exotic Nursery, Tooting, Surrey, S.—*Catalogue of Stove, Greenhouse, and Hardy Plants, Fruit Trees, Hyacinths, and other Bulbous Roots, &c.*

COVENT GARDEN MARKET.—SEPTEMBER 11.

SCARCELY any alteration has taken place here, business being very dull and no chance of improvement yet awhile. Large quantities of Walnuts reach us from Holland and Belgium in addition to other articles.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	1	6	Melons..... each	1	6	3	0
Apricots doz	0	0	0	0	Nectarines..... doz	3	0	6	0
Cherries lb.	0	0	0	0	Oranges..... 100	8	0	14	0
Chestnuts..... bush.	0	0	0	0	Peaches..... doz.	3	0	6	0
Currants..... ½ sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black..... doz.	0	0	0	0	Pine Apples..... lb.	4	0	0	0
Figs..... doz.	2	0	3	0	Plums..... ½ sieve	2	6	5	0
Gilberts..... lb.	1	0	0	0	Quinces..... doz.	0	0	0	0
Cobs..... lb.	0	0	0	0	Kissberria..... lb.	0	9	1	0
Gooseberries..... quart	0	0	0	0	Strawberries..... lb.	0	0	0	0
Grapes, Hothouse.. lb.	1	6	4	0	Walnuts..... bush.	10	0	20	0
Lemons..... 100	8	0	13	0	do. per 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.		
Artichokes..... each	0	3	to	0	6	Leeks..... bunch	0	3	to	0	0
Asparagus..... bundle	0	0	0	0	Lettuce..... per score	1	0	1	6	0	
Beans, Kidney, ½ sieve	2	0	3	6	Mushrooms..... pottle	2	0	3	0	0	
Scarlet Run..... doz.	2	0	3	0	Must.d. & Cress, punnet	0	2	0	0	0	
Beet, Red..... doz.	2	0	3	0	Onions..... per doz. bchs.	5	0	0	0	0	
Broccoli..... bundle	0	6	1	6	Parsley..... per sieve	3	0	0	0	0	
Brns. Sprouts ½ sieve	0	0	0	0	Parsnips..... doz.	0	9	1	0	0	
Cabbage..... doz.	1	0	1	6	Peas..... per quart	0	6	1	0	0	
Capsicums..... 100	2	0	3	0	Potatoes..... bushel	2	0	3	0	0	
Carrots..... bunch	0	6	0	8	Kidney..... doz.	0	3	0	4	0	
Cauliflower..... doz.	2	0	4	0	Radishes doz. bunches	0	9	1	0	0	
Celery..... bundle	1	0	2	0	Rhubarb..... bundle	0	0	0	0	0	
Cucumbers..... each	0	4	0	8	Savoy..... doz.	0	0	0	0	0	
pickling..... doz.	2	0	0	0	Sea-kale..... basket	0	0	0	0	0	
Eendoe..... doz.	1	0	0	0	Shallots..... lb.	0	8	0	9	0	
Fennel..... bunch	0	3	0	0	Spinach..... bushel	2	0	3	0	0	
Garlic..... lb.	0	8	1	0	Tomatoes..... per doz.	2	0	3	0	0	
Herbs..... bunch	0	3	0	0	Turnips..... bunch	0	6	0	0	0	
Horseradish..... bundle	2	6	4	0	Vegetable Marrows, dz.	1	0	2	0	0	

TO CORRESPONDENTS.

.. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

VARIEGATED PELARGONIUMS (*J. O. H. H.*).—Beauty of Oulton, Lady, and Golden Nugget are not variegated Pelargoniums, but belong to the golden Bronze Zonal section, and cannot be shown with Mrs. Pollock and Italia Unita, which are variegated Pelargoniums.

GROUND VINERY (*Lincolniensis*).—We see no reason why your proposed plan of a ground vinery should not succeed; but as it will be a true lean-to we are doubtful if the openings in the bricks at both front and back will be sufficient for ventilation, as your back wall of slate will be very hot in a sunny day. We should like openings at the ridge to be used in extreme cases. In this respect lean-to's are very different from span-roofed houses.

NECTARINES IN ORCHARD-HOUSE SHRIVELLING (*X. Y. Z.*).—We think the shrivelling of the Nectarines is chiefly owing to a deficiency of water and a bright sun. It sometimes happens from over-cropping, when at the last swelling the Nectarines take water greedily. See "Doings of the Last Week." Some Nectarines, and fine kinds too, are subject to this, and are exceedingly sweet, though not pleasant to the eye. We think in your case want of water, over-cropping, and bright sun were the cause. This season has been so variable, bright sun after mazy weather, that the fruit felt the extremes. We have several times dilled the glass in an orchard-house to prevent the fruit feeling the sudden change. The Noblesse of 9 inches in circumference are fine fruit.

HEATING—VINES IN POTS (*Idem*).—Your mode of heating will do very well—that is, having one pipe from the top of the boiler, taking it round the back border and then round the front border, and returning it to the bottom of the boiler. No better plan can be tried for getting a good and regular heat. There will not be too much piping, as you need not heat it more than you want. If you have the necessary heat, the less the heat in the pipes the better. You may have very good bunches of Grapes in pots if you take few of them; but recollect the pots will be almost solely dependent on your constant attention.

GRAPES CRACKING AND REMOVING (*B. A.*).—As a general rule, Grapes and other fruit will not be prevented cracking by partially dividing the footstalk of the fruit or bunch. The cracking takes place more from want of sap, or a sufficient temperature to mature it, than from their having too much of it. Fruits liable to crack in a low temperature will not crack in a higher one. Every case must be watched, so as to be able to decide. The taking off the fruit from a Vine in the orchard-house part would give greater strength to that part of the Vine which passed into the forcing-house, other things being equal; but it may not always have that effect. In your case the shoots in the forcing-house cease to grow, whilst the part of the Vine in the orchard-house grows vigorously. Just so: the fruit may have been taken off too late to benefit growth in the forced part, or the wood there getting matured so much sooner may cease to grow, whilst that in the orchard-house is growing freely. We have had a Vine with the top in three different temperatures, and therefore ripening in succession; but it is best to have a Vine for each place.

PLANTING A VINERY (*B. W. Stannus*).—We approve of your planting your wide span-roofed house with Vines in the centre as well as at the sides of the house; but if you wish the Vines in the centre to fruit down to the floor, they must not be much shaded by the side Grapes. Of the sorts chosen for such a late house we would describe with Black Hamburghs and substitute Calabrian Raisins and Trebbiano, which will keep to February and March, and we would lessen the number of Barbarossa and Black Alicante, and substitute Lady Downe's. In any of the cases we should not consider grafting necessary.

NARROW ROSE BORDER—CERASTIUM CUTTINGS (*Fred*).—For a Rose border only 2 feet wide you should have good soil from 2 to 2½ feet deep. The Cerastium may be planted at any time, little bits, a few inches apart, from now to January, and they will be nicely rooted for transplanting in April and May. Could you not borrow a little heat from your kitchen for the small glass house? If not, then a small iron stove would be necessary.

USES OF BORDER IN AN ORCHARD-HOUSE (*M. H.*).—You may grow Cucumbers in your house, planting them in the border by the wall, and training them to the rafters of the house on wires, about 15 inches from the glass; but you must clear your house of its proper occupants, the Peas, and whatever trees you may have, as the house must be kept much too hot for an orchard-house to do justice to the Cucumbers. We would not advise anything to be grown in such a border, except it were one or two rows of Strawberries in pots, a row of early Potatoes or Kidney Beans, or some such description of vegetables as would not interfere with the well-being of the fruit trees. The border would be very useful for Endive and Lettuces in autumn and winter and early spring. You might introduce a few roots of Rhubarb, and have a row of dwarf early Peas.

ROSE CUTTINGS (*M. P.*).—It is not now too late to strike cuttings of Roses. They may be inserted in sand in a cold frame in a warm situation, affording shade from bright sun. They will root slowly but surely, and be fit for potting off in April. During the winter they cannot have too much air, protection being afforded from heavy rains by drawing on the lights, and from frost by a covering of mats over the lights.

WORMS IN LAWN (*Idem*).—You may free your lawn from the worms by watering it with lime water, made by placing 12 lbs. of fresh or unslacked lime in a hogshead, and pouring thirty gallons of water over it, stirring it well up, and allowing to stand forty-eight hours. The lawn is to be watered with the clear liquid by means of a rose watering-pot during damp weather, giving a good soaking the evening succeeding one upon which a good watering has been given. Ammoniacal liquor diluted with six times its volume of water, will answer even better than the lime water; but it has the disadvantage of making the lawn look brown for a time. Both act by bringing the worms to the surface, whence they may be swept up and cleared away.

ROSES (*P. I. N.*).—You will have seen the list of Roses at page 174 by Mr. Radcliffe, all of which we know to be first-rate, and by growing them you cannot fail to have an abundant bloom in autumn.

LINUM FLAVUM (*Idem*).—*Linum flavum* is not a good bedding plant, not flowering sufficiently long, nor at a desirable season for a bedding plant. It will never supplant *Calceolarias* for bedding purposes.

CLIMBERS FOR FERNERY (*Idem*).—For your cool house the following may answer, as *Passiflora* principles does well in the house—*Bomarea multiflora*, *Clematis Fortunei*, *C. lanuginosa*, *C. hybrida splendens*, *C. Jackmanii*, and *C. Standishi*; *Cobaea scandens variegata*, *Ficus repens* (for a wall), *Hibbertia debata*, *H. volubilis*, *Jasminum gracile variegatum*, *Kennedyia inophylla floribunda*, *K. monophylla*, *K. Marryattae*, *Rhynchospermum jasminoides variegatum*, and *Sollya linearis*. If shaded they will not succeed.

CELERY LEAVES DISEASED (*W. B. Upton*).—The specimen sent us is infested with a parasitic fungus, or the rust in its worst form. Your only

remedy is to pick off the worst infested leaves and burn them, and to dust those but partially affected with a powder formed of equal parts lime powdered, and flowers of sulphur, having previously given a few good waterings over the foliage of lime and soot water, made by placing a peck each of soot and unslaked lime, and pouring over them sixty gallons of water, stirring well up, and allowing it to stand two days, then water with the clear liquid, employing a rose watering-pot. The powder should be applied in the morning whilst the leaves are wet with dew, so that it may adhere to them.

PEACH TREE LEAFLESS (*A Subscriber*).—The ants have not caused the "leaves on the young shoots to curl up and be destroyed." You may prevent the ants ascending the wall by drawing a line of coal tar an inch broad along the bottom of the wall, a little above the ground, and if you sprinkle guano over their nests, it will drive them away. We think it is mildew that has caused all the leaves to curl up, and we advise the whole of the shoots to be dusted with flowers of sulphur, having previously given the trees a good watering, and two or three good syringings over the foliage with a solution of soft soap, 2 ozs. to a gallon of water. In a day or two wash off the sulphur by syringing with clear soft water, and dust again with flowers of sulphur.

PLUMBAGO CAPEENSIS FLOWERING IN SOLITARY TRUSSES (*Idem*).—Your only hope of having all the shoots in flower at one time, is by stopping those that are disposed to flower at any early season, or stop all the shoots up to a certain period, say July, and then allow all to grow and go for bloom. A lengthened period of bloom is one of its many characteristics, it being a fine old plant, very useful, yet much neglected.

CLEANING HOT-WATER APPARATUS (*Amateur Gardener*).—It would be absurd to take a hot-water apparatus to pieces for the purpose of cleaning it, for the removal of the fur would be more injurious to the pipes and boiler than beneficial. Well put up at first, and the best materials being used, the apparatus requires nothing more than a pipe at the lowest point to let off the sediment, which should be done periodically, and the whole of the pipes and boiler be occasionally emptied, and the sediment for the most part being carried to the boiler by the return-pipes will be cleansed by the drawing off of the water.

WINTERING PELARGONIUMS (*Idem*).—You may place them in sand in chests after you have removed the soil and all the leaves, and allowed them to lie a few days in an airy place to dry. It is better to have them in single layers only, and not to cover the top much with sand; but they will keep well in layers, in a cool, dry place. You may also place the plants in the linen closet, hanging them heels upward; but if it be very dry and warm the roots and stems will, we fear, shrivel considerably. The wine-cellar is by far the best situation.

PARINGS OF HORSES' HOOFES (*Reading*).—They are a good addition to a vine-border, or to any other fruit-tree border requiring a very gradual and lasting fertiliser.

ESPALEERS, PYRAMIDS, CORNONS (*W. T.*).—As every species of fruit tree requires a different mode of pruning, to state the information you ask upon these forms of growth would fill a whole Number of this Journal.

EXHIBITION OF ZONAL PELARGONIUMS (*Ipomea*).—You can obtain admission to this exhibition at the Royal Horticultural Society's Garden, at South Kensington, on the 17th inst., by paying one shilling at the entrance.

NAMES OF FRUIT (*R. S. R.*).—Your Peas are, 1, Gloit Morecan; 2, Droumore.

NAMES OF PLANTS (*B. A. S.*).—*Cucumis Melo*. (*Veritas*).—1, *Lepurus incurvatus*; 2, *Juncus lampocarpus*. (*J. T.*).—1, *Sedum githago* Braunii; 2, *S. Galeotti*; 3, *S. Martensii*. (*H. H. W.*).—1, *Sedum Telephium*; 2, *Juncus virginiana*; 3, *Ononis arvensis*. (*J. F. Sinclair*).—*Alonsona caulilata*. (*Essex*).—1, *Anemone vitifolia*; 2, *Stauracanthus Gardeni*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending September 10th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 4	29.835	29.807	74	54	63	61	S.W.	.10	Cloudy; overcast; clear and fine at night.
Thurs. . 5	29.821	29.798	73	42	63	61	W.	.02	Rain; fine; clear and very fine.
Fri. . . 6	29.773	29.725	60	52	62	61	S.W.	.12	Fine; heavy showers; fine at night.
Sat. . . 7	30.000	29.851	72	40	63	60	S.W.	.00	Overcast; fine; clear at night.
Sun. . . 8	30.030	29.848	73	40	63	60	S.	.00	Very fine; cloudy; exceedingly fine at night.
Mon. . . 9	29.856	29.731	74	50	62	60	S.W.	.32	Very fine; overcast; excessively heavy rain.
Tues. . 10	29.887	29.785	73	41	62	60	S.W.	.30	Clear; fine; thunder and heavy rain, 5 P.M.; clear.
Mean	29.886	29.792	72.57	45.57	62.43	60.43	..	1.36	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

TESTIMONIAL TO MR. HEWITT.

I AM glad to see the project of a testimonial to Mr. Hewitt brought forward in THE JOURNAL OF HORTICULTURE, and doubt not it will be heartily responded to; and although I would not praise up Mr. Hewitt at the expense of other good and able judges of poultry, I think he has done more than most of them to diffuse a knowledge, and bring forward good poultry. I have known Mr. Hewitt some time, and if I have had occasion to think I have been not judged rightly, he has always given me convincing proof in the most civil and courteous manner. I shall feel a pleasure in subscribing my small mite, and do all I

can in this neighbourhood to further the matter.—WM. CHURCH, Nantwich.

SUBSCRIPTIONS.

Proprietors of JOURNAL OF HORTICULTURE	£10	0	0
Viscountess Holmesdale	5	0	0
J. Pares, Esq.	1	1	0
J. Westgarth Wooler, Esq.	1	1	0

[A committee has been formed, and will be announced next week.—Ems.]

DUCKS POISONED BY CORN COCKLE SEED.

I WELL remember when a child coming out of a corn field with a handful of the black seeds of Corn Cockle (*Agrostemma githago*, now called *Lychnis githago*). My mother seeing what I had took them from me, and told me never again to gather

for eating any of the seeds, as they were poison, and that I might easily lose my life by eating them. She said that she once knew a number of hungry fowls eating heartily of the seeds, and several of them died.—S.

POULTRY PRODUCE.

READING Mr. Philip Crowley's account of his poultry produce in your JOURNAL OF HORTICULTURE, No. 334, and thinking I have been even more prosperous with my hens, I venture to send you the account, which haply you may see fit to find a corner for in the same Journal.

For two months, from Christmas 1866, I had only four hens, and up to August 31st (1867), only ten (six added in March). These have laid 713 eggs, have been sat upon 121 out of the number, bringing eighty-six chickens; of which we have reared seventy-five, have killed some for the table at four months and a half old, weighing good 4 lbs., and we have used no extra care, only good feeding and great cleanliness. One of my hens (a Buff Cochins), has laid 144 eggs (130 without stopping), and reared one brood of chickens. The ten hens are two Cochins and eight Dorkings.—ANN WYNNE, *Rhôs Annydd, Rughall, Tunbridge Wells.*

CROSS-BRED BRAHMAS AND DORKINGS.

In January last I collected together a lot of fowls of mixed character, but chiefly cross-bred Brahmans and Dorkings. Having met with an accident my stock was considerably reduced, and the average number was thirty-two hens. The result up to June 30th will be best understood by the annexed table:—

Months.	No. of eggs.	Chickens hatched.	Chickens reared.	No. of hens.
January ..	25	0	0	37
February ..	268	1	0	37
March ..	244	52	43	36
April ..	267	35	25	31
May ..	288	43	31	30
June ..	183	23	29	21
Total ..	1295	152	119	32 average

I may state that I have a grass run of an acre in extent and a stable-yard, and that I allow my stock one bushel of corn weekly. This quantity, with what the fowls procure for themselves, has been found sufficient. Newly laid eggs in my neighbourhood (Liverpool), are never worth less than 1s. per dozen, and during the winter months as much as 3s. I have had a constant supply hitherto of chickens and eggs for the table, also for hatching.—POWIS.

GOLDEN-PENCILLED HAMBURGH AND GAME FOWLS.

I SEND you an account of poultry produce from January to June of the present year. On the 1st of January my stock in one yard consisted of nine Golden-spangled Hamburg hens, bred in 1866, to which two Golden-pencilled hens (age unknown), were added on the 1st of April. These hens began to lay on the 15th of February, and the number of eggs per month was as under.

	Eggs.		Eggs.
February ..	31	May ..	106
March ..	86	June ..	71
April ..	176		
		Total ..	470

On the 3rd of June, one of these hens was killed accidentally. About the middle of the same month another strayed away and was lost, and early in July I sold the remaining nine hens for 19s., having determined to give up keeping Hamburgs.

During the same period of time, I had in another yard a Black-breasted Red Game cock with three hens of the same breed. These hens began to lay on the 5th of February, and the number of eggs per month was as under—

	Eggs.		Eggs.
February ..	30	May ..	15
March ..	32	June ..	22
April ..	18		
		Total ..	117

During the same period each of these hens has had a sitting of eleven eggs under her, with the following results:—

On the 31st of March, the first hen that sat hatched seven chickens, three cocks and four hens, all of which are now alive and fine well-grown birds.

On the 3rd of May, the second hen that sat hatched five chickens, two cocks and three hens, and of these one cock and two pullets are alive and doing well, but, of course, not such

fine birds as those hatched on the 31st of March. The third hen should have hatched about the 14th of May, but owing to mismanagement whilst I was absent from home (although there were chickens in most of the eggs), none hatched out.

The covered yards I have for my poultry are about 6 yards long by 2 yards wide, with suitable roosting and laying places, and each lot of birds has been let out for half the day (the Game in the morning, and the Hamburgs in the afternoon), into about a quarter of an acre of ground, chiefly grass.

Two of the Game hens are now (August 24th), laying again, and average about a dozen eggs per week.

The cost of wheat, barley, and meal for the whole stock, from the 1st of January to the 1st of July, was £4 2s. 9d. This includes groats occasionally for the young chickens.—G. S., York.

RED CAPS AND GAME FOWLS.

HAVING read several accounts of poultry produce in the Journal, I send you mine, which bears comparison with any published. I have ten hens, seven Red Caps, and three Game, which produced me in

	Eggs.		Eggs.
January ..	42	May ..	188
February ..	130	June ..	100
March ..	179		
April ..	198	Total ..	837

Out of these I sat sixty-three, hatched forty-three, and reared thirty-two chicks.

Your correspondent, Mr. Philip Crowley, averaged from twenty-two hens just over fifty eggs for each, mine have averaged nearly eighty-four eggs from each hen; but he has been more successful in rearing chickens.—HENRY COOPER, *Carlton Hill, near Nottingham.*

SILVER-PENCILLED HAMBURGH.

I BOUGHT six hens on January 26th, and two more hens and a cock on the 4th of February, the latter from a different part of the country, and the following is the produce:—

	Eggs.		Eggs.
February ..	14	June ..	146
March ..	64	July ..	119
April ..	135		
May ..	143	Total ..	626

Thus far in this month (August), I have rather more than in July, although some of the birds are moulting. I should add that not one of the hens has wanted to sit.—S.

BARNSELY POULTRY SHOW.

THIS was held on the 3rd instant. The following were the awards:—

GAME COCK (Any colour).—Prize, W. J. Cope, Barnsley.
 GAME (Black-breasted and other Red).—First, A. Senior, Riley, Kirkburton. Second, W. J. Cope.
 GAME (Any other colour).—First, G. Noble, Staincliffe. Second, L. Batty, Bolton. Highly Commended, W. J. Cope.
 SPANISH.—First, J. Thresh, Bradford. Second, W. Harvey, Sheffield. Highly Commended, E. Brown, Sheffield.
 DORKINGS (Any colour).—First, W. H. King. Second, S. & R. Ashton, COCHIN-CHINA (Buff or Cinnamon).—First and Second, W. Harvey.
 COCHIN-CHINA (Any other colour).—Prize, T. Richardson, Barnsley.
 BRAHMAS (Any colour).—First, Mrs. Newman, Worslough. Second, T. Richardson. Highly Commended, W. Harvey.
 HAMBURGH (Gold or Silver-spangled).—First, J. White, Netherton. Second, W. Harvey.
 HAMBURGH (Gold or Silver-pencilled).—First, Messrs. Ashton & Booth, Broadbottom, Mottram. Second, E. Batty.
 ANY OTHER VARIETY EXCEPT BANTAMS.—First, Col. Stuart Wortley, Grove End Road, London. Second, T. C. & E. Newbitt, Epworth.
 GAME BANTAMS.—First, G. Noble, Dewsbury. Second, T. Vickerman, Barnsley. Highly Commended, W. J. Entwistle, Leeds.
 BANTAMS (Any other variety).—First and Second, W. J. Cope.
 GUINEA FOWLS.—First and Second, H. Merkin, Driffield.
 DUCKS (Aylesbury).—Prize, J. Wilkinson, Barnsley.
 DUCKS (Any other variety).—First, J. White, Wakefield. Second, Mrs. Newman, Worslough.
 GESE (Any colour).—First, J. White. Second, H. Ulliyott, Blackmoor, Penistone.
 TURKEYS.—First, T. Richardson. Second, F. W. T. V. Wentworth.
 SELLING CLASS.—First, W. Harvey. Second, H. Ulliyott.

PIGEONS.

CARRIERS.—First, E. E. M. Roys, Rochdale. Second, T. C. & E. Newbitt.
 PORTERS.—First, E. Brown, Sheffield. Second, E. E. M. Roys.
 BARNSELY.—First, E. Brown. Second, B. Kaye, Honley.
 TUMBLERS.—First, E. Brown. Second, F. Waitt, Birmingham.
 JACOBS.—First, B. Kaye. Second, E. E. M. Roys.
 TRUMPETERS.—First, F. Waitt. Second, S. & R. Ashton.
 FANTAILS.—Prize, T. C. & E. Newbitt.
 ANY OTHER VARIETY.—First and Second, F. Waitt.
 SELLING CLASS.—First, W. Harvey. Second, Rev. C. Spencer, Norfolk. Highly Commended, F. Waitt.

RABBITS.—*Lop-eared.*—Prize, J. Taylor, Sheffield. *Himalayan or Silver-Grey.*—First, H. Harvey, Barnsley. Second, J. A. Barrett, Dewsbury. *Any other fancy variety.*—Prize, E. E. M. Roys.

The Judges were Mr. T. Challoner, Bailborough, near Chesterfield, and Mr. John Crossland, Wakefield.

BRIGHOUSE AND RASTRICK POULTRY SHOW.

The first annual Show of Pigs, Poultry, Pigeons, and Dogs, was held at Brighouse, on Saturday, the 7th. The Show originated with a few of the members of the Working Men's Institution, and may, therefore, be considered due to the exertions of the operative class, though readily supported by the gentlemen and tradesmen of the locality.

The show of Poultry was not large, but the quality of the birds was generally good, although there were here and there specimens that required rest while moulting.

In Pigeons, the Pouters and Carriers were of high quality, and Mr. Hawley's pair of Whites were as good as can be wished for. Barbs were wretched, but Jacobins and Owls good, and the two pair of Turbits shown by Messrs. Thompson and Yardley respectively, were very fine. Mr. Burgess, of Brighouse, kindly lent his Pekin and Japanese Bantams, and his celebrated stud of Dogs for exhibition, but not for competition.

GAME.—First, J. Hodgson, Bowling. Second, J. Sunderland, Hipperholme. Highly Commended, G. Noble, Staincliffe.

SPANISH.—First, H. Beldon, Biogley. Second, J. Thresh, Bradford. Commended, W. Goodall, Brighouse.

DORRINGS.—First, W. H. King, Rochdale. Second, H. Beldon. Highly Commended, J. T. Beaumont, Huddersfield.

COCHINS.—First and Second, H. Beldon. Highly Commended, B. Pinder, Brighouse; H. M. Crossley, Rastrick.

BRAMHMS.—First, A. H. Verity, Cheshire. Second, H. Beldon. Highly Commended, H. Bishop, Nottingham.

POLANDS.—First and Second, H. Beldon.

HAMBURGS (Golden and Silver-pencilled).—First, W. Bentley, Hipperholme. Second, H. Beldon. Highly Commended, H. Beldon; Mrs. Holmes, Halifax.

HAMBURGS (Golden or Silver-spangled).—First and Second, H. Beldon.

HAMBURGS (Black).—First, H. Beldon. Second, W. Bartle.

GAME BANTAMS.—First and Second, G. Noble. Highly Commended, F. Entwisle, Leeds; H. Beldon.

DUCKS (Any variety).—First, H. Beldon. Second, M. Farrand, Dalton. Highly Commended, H. Beldon. Commended, R. Parkinson, Brighouse.

PIGEONS.

POUTERS (Any colour).—First, F. Crossley, Elland. Second, J. Hawley, Bingley. Highly Commended, J. Hawley.

CARRIERS.—Second, J. Hawley. Highly Commended, J. Hawley; H. Yardley, Birmingham.

TUMBLERS.—First, J. Hawley. Second, F. Crossley. Highly Commended, J. Hawley. Commended, H. Yardley.

BARBS.—First, H. Yardley. Second, J. Hawley.

JACOBIANS.—Prize, E. C. M. Roys, Rochdale. Highly Commended, F. Crossley; J. Thompson, Bingley. Commended, J. Thompson.

OWLS.—First, F. Crossley. Second, J. Thompson. Highly Commended, J. Hawley; H. Yardley.

TURBITS.—First, J. Thompson. Second, H. Yardley.

ANY OTHER VARIETY.—First, H. Yardley. Second, F. Crossley. Highly Commended, J. Hawley; F. Crossley; J. Thompson.

COMMON PIGEONS.—First, W. Gooder, Rastrick. Second, H. Nelson.

The Judges for Poultry were Messrs. E. Hutton, Padsey; and J. W. Thompson, Northowram.

COTTINGHAM POULTRY SHOW.

(From a Correspondent.)

THE above Show took place on the 29th of August. Of each variety there was a capital exhibition, with the exception of Game. Spanish, Dorking, Cochins, and Polands, were well represented, and some first-class birds exhibited.

SPANISH.—First, G. Holmes, Driffield. Second, Messrs. Newbitt, Epworth. *Chickens.*—First, M. Robinson, Cottesingham. Second, G. Holmes. *Cock.*—First, W. Edmondson, Beverley.

DORRINGS.—First, W. Charter, Driffield. Second, W. Thompson. *Chickens.*—First, D. White, Driffield. Second, G. Bromby. *Cock.*—Prize, G. Holmes.

COCHIN-CHINA.—First, J. Hatfield, Cottesingham. Second, O. A. Young, Driffield. *Chickens.*—First and Second, R. Loft, Woodmansey. *Cock.*—Prize, R. Loft.

GAME (Black-breasted).—First, G. Holmes. Second, W. Raylor. *Chickens.*—First, G. Suttin, York. Second, W. Charter, Driffield. *Cock.*—Prize, J. Lacup, Driffield.

GAME (Any variety).—Prize, G. Holmes. *Chickens.*—First, R. Bromley. Second, R. Wool, Beverley. *Cock.*—Prize, J. Lacup.

POLANDS.—First and Second, E. Proctor, Hull. *Chickens.*—First and Second, E. Proctor. *Cock.*—Prize, E. Proctor.

HAMBURGS (Golden).—First, Messrs. Newbitt. Second, J. Blanchard, Driffield. *Chickens.*—First, G. Holmes. Second, O. A. Young. *Cock.*—Prize, G. Holmes.

HAMBURGS (Pencilled).—First, G. Holmes. Second, A. Hawe, Barnston. *Chickens.*—First, G. Robinson, Frodingham. Second, J. Hawe. *Cock.*—Prize, J. Marshall, Kirkella.

HAMBURGS (Silver-spangled).—First, J. Blanchard. Second, J. Holmes. *Chickens.*—First, J. Hall, Willerby. Second, G. Holmes. *Cock.*—Prize, R. Cook, Cottesingham.

HAMBURGS (Silver-pencilled).—First, G. Holmes. Second, J. H. Wilde, Holme. *Chickens.*—First and Second, G. Holmes. *Cock.*—Prize, G. Holmes.

BANTAMS (Gold).—First, T. C. Harrison, Hull. Second, J. Marshall, Kirkella. *Chickens.*—Prize, T. Viall. *Cock.*—Prize, T. C. Harrison.

GAME BANTAMS.—First, G. Holmes. Second, J. Blanchard. *Chickens.*—First, G. Holmes. Second, G. Blakey. *Cock.*—Prize, T. C. Harrison.

BANTAMS (Any variety).—First, T. C. Harrison. Second, J. R. Jessop, Hull. *Chickens.*—First and Second, T. C. Harrison. *Cock.*—Prize, T. C. Harrison.

ANY DISTINCT VARIETY.—Prize, R. Loft. *Chickens.*—Prize, J. Hodgkinson, Hull. *Cock.*—Prize, R. Loft.

FARMYARD CROSS.—First, R. Loft. Second, G. Robinson. *Chickens.*—First, R. Loft. Second, T. Coverdale. *Cock.*—Prize, G. Robinson.

SELLING CLASS.—First, R. Loft. Second, T. Gawan, Beverley. *Cock.*—First, Miss Creyke, Bridlington.

GEESE.—First, O. A. Young. Second, W. Charter.

DUCKS (Aylesbury).—First, G. Nuthrowne, Hummanby. Second, O. A. Young.

DUCKS (Any variety).—First, T. C. Harrison. Second, W. Charter.

TURKEYS.—First, W. Usher, Weiton. Second, J. Kymes, Hull.

PIGEONS.

CROPPERS.—First, F. Key, Beverley. Second, Messrs. Newbitt.

CARRIERS.—First, H. Yardley, Birmingham. Second, R. Bellamy, Leveu.

TURBITS.—First, Miss F. Easton, Hull. Second, J. Campey.

TRUMPETERS.—First, A. Beaumont, Beverley. Second, J. Campey.

JACOBIANS.—First, T. Ellerington. Second, C. N. Lythe, Cottesingham.

FANTAILS.—First, T. Ellerington. Second, Messrs. Newbitt.

DRAGONS.—First, H. Taylor, Newland. Second, J. W. Thompson, Hull.

TUMBLERS.—First, C. N. Lythe. Second, J. Campey.

BARBS.—First, H. Yardley. Second, W. Barrett, Hull.

NONS.—First, G. H. Pickering, Driffield. Second, C. N. Lythe.

ANY VARIETY.—First, J. W. Thompson. Second, H. Yardley.

RABBITS.—First and Second, Miss F. Easton.

The Judges for Poultry were F. Ferguson, Esq., Risby Park; and W. W. Boulton, Esq., Beverley.

WORKSOP POULTRY SHOW.

THIS was held in connection with the Floral and Horticultural Society, on Thursday and Friday, September 5th and 6th.

The following is the list of awards:—

YOUNG BIRDS.

SPANISH.—First, Duchess of Newcastle, Notts. Second, M. Farrand, Dalton, Huddersfield. Third, Messrs. Burch & Boulter, Sheffield. Highly Commended, F. James, Peckham, Surrey; W. Harvey, Sheffield.

DORRINGS.—First and Cup, J. Anderson, Meigle. Second and Third, Hon. H. W. Fitzwilliam, Rotherham. Fourth, Dr. D. C. Campbell, Brentwood, Essex. Highly Commended, J. White, Warley, Northallerton; F. Parlett, Chelmsford. Commended, Dr. D. C. Campbell; Mrs. A. Hurt, Alderwasley, Derby.

COCHINS (Buff).—First and Cup, Duchess of Newcastle. Second, W. A. Taylor, Manchester. Third, Rev. G. Gilbert, Norwich. Highly Commended, Rev. C. Spencer, Attleborough, Norfolk.

COCHINS (Partridge or Grouse).—First, C. Sidgwick, Keishley. Second, W. A. Taylor. Third, J. R. Rodbard, Wington, near Bristol.

COCHINS (White, or any other variety).—First, A. O. Worthington, Burton-upon-Trent. Second, C. Chidmoe, Chesterfield, Derbyshire.

BRAMA FOOTRA (Dark).—First, R. W. Boyle, Bray, County Wicklow, Ireland. Second, Duchess of Newcastle. Third, H. Lacy, Heben Bridge. Highly Commended, R. W. Boyle; W. Harvey. Commended, F. James.

BRAMA FOOTRA (Light).—First, J. Pares, Postford, near Guildford. Second, and Third, H. Dowsett, Fitchley, near Chelmsford. Highly Commended, T. W. Amis, Clapham, Surrey.

GAME (Black-breasted Red).—First, Duke of Newcastle, Notts. Second, E. Turner, Sheffield. Third, J. West, Worksop. Fourth, T. Burgess.

GAME (Brown-breasted Red).—First, C. Chaloner. Second and Fourth, J. Fletcher, Manchester. Third, Duke of Newcastle. Highly Commended, Rev. W. J. Mellor, Nottingham.

DUCKING, AND OTHER GREYS AND BLUES.—First, and Cup, Duke of Newcastle. Second, C. Chaloner. Third, S. Matthew, Sloughmarket, Suffolk. Highly Commended, Duke of Newcastle; J. Fletcher.

GAME (White and Pile).—First, R. Butcher, Cresswell, near Chesterfield. Second, Miss Crawford, Southwell, Notts. Third, C. Chaloner.

GAME COCKEREL (Any variety).—First, Cup and Second, C. Chaloner, Third, J. Fletcher. Fourth, W. Bourne, Heaviley, near Stockport. Fifth, T. Burgess.

HAMBURGS (Golden-spangled).—First, T. Walker, jun., Denton, near Manchester. Second, W. A. Hyde, Hurst, Ashton-under-Lyne. Third, J. Roe, Haddfield near Manchester.

HAMBURGS (Silver-spangled).—First, Duchess of Newcastle. Second, Messrs. Ashton & Booth, Mottram, Cheshire. Third, H. Pickles, jun., Early, Skipton. Highly Commended, J. Fielding.

HAMERONS (Golden-pencilled).—First, H. Pickles. Second, T. Wrigley, jun., Middleton, near Manchester. Third, T. J. Harrison, Kendal.

HAMBURGS (Silver-pencilled).—First and Cup, Duchess of Newcastle. Second and Third, Messrs. W. & J. Bairstow, Bingley, Yorkshire. Highly Commended, H. Pickles. Commended, J. E. Powers, Yorkswade, Beds.

HAMBURGS (Black, or any other variety).—First and Second, C. Sidgwick.

GAME BANTAMS (Any variety).—First and Cup, J. W. Morris, Rochdale. Second, B. Jarvis, Mansfield, Notts. Third, Duchess of Newcastle. Fourth, W. F. Entwisle, Leeds. Fifth, J. W. Kellaway, Isle of Wight. Commended, G. Smith, Derbyshire; Miss Crawford; J. Crossland, jun., York-shire; R. Swift, Southwell, Notts.

GAME BANTAM COCKEREL (Any variety).—First, H. Shumach, Southwell, Notts. Second, J. Crossland, jun. Third, R. Charlesworth, Manchester. Fourth, G. R. Davies, Cheshire.

BANTAMS (Any other variety).—First and Third, M. Leno, Dunstable, Beds. Second, Messrs. S. & R. Ashton, Mottram, Cheshire.

DUCKS (Aylesbury).—First, M. Farrand. Second, E. Leech, Rochdale. Third, C. Chaloner.

DUCKS (Honon).—First, E. Leech. Second, C. Sidgwick. Third, C. Chaloner.

DUCKINGS (Any other variety).—First, Duchess of Newcastle. Second, C. Chaloner. Third, G. Goodwin.

GOSSINGS.—First, Duchess of Newcastle. Second, C. Chaloner. Third, H. Savile, Notts. Highly Commended, C. Chaloner.
 TURKEYS.—Poults.—First, Duchess of Newcastle. Second, Viscountess Galway, Bawtry. Third, Rev. W. H. Mellor. Highly Commended, H. Savile.
 ANY OTHER VARIETY.—First and Third, Col. Stuart Wortley, Grove End Road, London. Second, Duchess of Newcastle. Highly Commended, C. Chaloner.

SELLING CLASS (Any breed).—First, M. Farrand. Second, C. Chaloner. Third, M. Brooksbank, Manchester. Highly Commended, Rev. G. Gilbert (Buff Cechins); H. Savile. Commended, M. Brooksbank.

MANAGEMENT OF LONG-EARED RABBITS.

PERHAPS the following notes may be of some use to "INQUIRER":—

Rabbits must be kept warm, if you wish to produce long ears. The hutches should not be too large, nor lofty, from 14 to 15 inches in height enough.

The breeding-box should be supplied with plenty of soft hay previous to the doe's kindling—that is, fill the box from the floor to the ceiling.

After the doe has kindled some four or five days, select four of the finest Rabbits and destroy the others. Four or five will grow much larger than seven or eight, the number a doe often has.

Feed plentifully with oats, barley meal, peas, &c., and give the doe and the young Rabbits plenty of green meat; in fact, as much as they can eat. The best I know is that weed of the fields called soft thistle.

Keep the Rabbits warm, much depends on this. Hang a sack or cloth at night over the front of the hutch. I have seen some hutches glazed; but this I do not recommend.

Keep the young Rabbits with the doe as long as she will allow them to remain with her. When she becomes troublesome to the young ones, you can shut them in the breeding-box at night, also for several hours in the day, letting them out occasionally. Being together, the heat causes the ears to increase in length. You can stroke the ears lightly forward every time you visit them. By so doing they will gain that position so much admired in good lop-ears.—SPANISH.

WHAT WILL BE THE RESULT?

WILL you express your opinion on the following state of things? On the 25th of July a virgin queen led off a swarm; she was seen to go out on the 28th, but soon returned *in statu quo*; on the 30th pollen was being carried in, so that I concluded all was right.

When three weeks had expired I daily expected to see a flight of young bees, but day after day I was disappointed, though I had fed moderately, and pollen was continually carried in. Twenty-six days after pollen was first seen to be taken in, a young drone (I fancy about eighteen days old), was lugged out alive; it was small as though bred in a worker cell. Is there here a want of control over the spermathecal organs, as in the case related by Mr. Woodbury, so that I may look for worker eggs to be laid when things have righted themselves? This result seems to be scarcely due to retarded impregnation, for the hive will not admit of this. I want to keep the queen if she is likely to prove a layer of worker eggs.—J. C.

[This is a case upon which we find it impossible to offer an opinion. All may yet come right, as in the cases to which you refer as having been related by Mr. Woodbury, or the queen may remain a virgin, and in that event will turn out a confirmed drone-breeder. It is also just possible that the queen may be defunct, and that the diminutive drone may be the offspring of a fertile worker; but this contingency is much more unlikely than either of the others.]

LIGURIANISING AN APIARY—REMEDY FOR THE STING OF A BEE.

I AM greatly obliged to "A DEVONSHIRE BEE-KEEPER," for the trouble he has taken to answer my questions so fully on the above subject. At the same time I think he makes the operation of substituting queens in bar-hives appear more difficult than need be. I have this season removed three queens and substituted fresh ones in their place without any mishap, and without half the precautions he seems to think necessary. I hope our "Devonshire" friend will not feel aggrieved at a "beginner" advancing any theory in opposition to his own, as I am sure he is anxious to simplify all operations with bees as much as possible.

I had better state my plan of operating, and the success attending it, and leave others to try whether it is simply a matter of luck or not. I received my first Ligurian queen on the 1st July, having formed an artificial swarm the day before by taking a brood-comb out of No. 4, and placing it in No. 6 (both Woodbury-hives), which was then placed upon the stand occupied by No. 1, the latter being removed. "A DEVONSHIRE BEE-KEEPER" advised I should "immerse the queen in liquid honey," and then "drop her into the hive among the bees through the hole at the top," as being the likeliest method to insure success. Somehow I could not fancy this plan, and did not wish needlessly to endanger the life of her Ligurian majesty, and I knew from experience the bees I wished her to reign over were regular "Tartars," so I placed perforated zinc over the hole in the top of the hive, and then put the little box in which she was sent on one end (having removed the lid), and a bell-glass over it, so that I could see what was going on. After awhile I allowed four or five bees to come up, but soon the queen was seized by one of them, and would have been killed perhaps had I not interfered. I then waited for some time and tried again (having in the meantime left them over the hole as above mentioned), then I admitted six or eight bees from below; but after a few minutes had elapsed two of them seized her and tried to inflict a mortal wound, and I had to cut one of them in two to rescue her, and even then it held so fast I had to remove both together. After this I thought the safest plan would be to turn the box bottom upwards over the hole, and allow them to fraternise through the perforated zinc, as recommended in "Bee-keeping for the Many." I did so, and late in the evening again placed the box on end as before, and allowed a number of bees to ascend, when they behaved in a more civilised manner, and fraternised with the Ligurian workers, who seemed to cling together about their queen as though jealous of evil. However, as all seemed peaceable and they set up a joyful hum, I left them for the night. In the morning they seemed all right in the box; but the poor workers who, tired of their confinement, ventured out of the hive, were seized by the guards, stung, and cast out by dozens, while those in the box seemed quite on friendly terms with their black relatives; but I believe every Ligurian which left the hive was slain. The queen never leaving it proved to be safe.

This was my first attempt. The others were far more easy and simple, and equally, nay, more successful, as I not only saved the queen in each case, but also the lives of her entire body-guard, the whole of the workers sent with them being preserved, and regularly up to the present time taking their place of duty among the other busy labourers. And these latter ones were added, not to artificial swarms, but to stocks whose queens were previously taken from them.

I received them late in the evening of the 24th ultimo. On the 25th I removed the queens from Nos. 4 and 5, and placed the boxes over the hole in the top of the hives, having previously removed the lids and placed perforated zinc in their stead, and also sprinkled both these and the bees in the hive with peppermint-scented syrup, and rubbed it well upon the zinc. The same evening (not "four or five days afterwards"), before they would think of forming royal cells, having had the new queen in communication with them all day, I turned the box on its end, placed a bell-glass over, and allowed the bees to ascend. All seemed agreeable, so I turned the box over again and left them. On the 26th I simply removed the perforated zinc from the other and allowed them to mingle, they set up a loud hum and I left them. On the 29th I examined both stocks, and found the new queens all right and busy laying eggs, and the workers were all right too, much to my gratification.

In another case of substitution, it was one of the black queens I removed from one of the above stocks. She was a very fine young one I had artificially raised, and so I resolved to remove the old one from No. 3, as I could find no eggs in the combs, and place her there instead. I simply removed the old one, then put some of the syrup upon the young one with a feather, and placed her at once upon a comb in the midst of her new subjects. And I saw her yesterday all right and busy laying eggs.

The above I submit is better than placing the queen in a cage for two or three days, and is far more simple and easy for "beginners," and will, I hope, induce them to try and be resolved to overcome any seeming difficulties in the way. I thought if the scented syrup was good for uniting stocks or swarms, why not for uniting queens to strange stocks?

I do not see in any of the bee books any efficient and easily-applied remedy for the sting of a bee. I heard of one the other day from a friend of mine, at once simple, cheap, and effectual, and it is generally near at hand, too, and that is good vinegar. I have never seen it mentioned before, but I venture to say, if your readers will try it, they will need no other remedy.—J. R. J.

[I was just as fortunate as your correspondent with the first Ligurian queens which I imported, and like him felt confident of continued success. Caution is, however, born of experience, and the advice given by me in page 188 is the result of eight years' practice, embracing some hundreds of operations, varied in almost every conceivable manner.

Young bees receive a strange queen much more readily than old ones, and for this reason an Italian queen may be given to a small swarm or nucleus formed in the manner advised by me in "our Journal" of the 11th of April last, with a good chance of her being accepted. Immersing the alien queen in liquid honey, and then dropping her into the hive at the top is an American plan, and by no means a bad one. When adopted with a nucleus consisting only of *young* bees, I regard its success as tolerably certain, and being also simple and easy, I recommended it to "J. R. J."

Vinegar is probably just as good as a great many other reputed remedies for bee stings.—A DEVONSHIRE BEE-KEEPER.]

NOTES OF EXPERIENCE IN BEE-KEEPING.

SEVERAL times during this bee-season have I been on the point of writing you with regard to its extraordinary nature, but have not done so, wishing to hear from others in different parts of the country whether their bees had been similarly affected as mine.

I consider it as a whole never to have been a worse year. Unquestionably, as regards swarming, or rather want of it, it has been with me most remarkable. As regards honey, I should say that in this neighbourhood (Blackheath), from the 25th of June to the 14th of July inclusive, when the limes were in full blossom, I rarely remember a better collection, the weather having been most favourable (a moist warmth, with a good deal of electricity in the air), causing the blossoms to yield large quantities of honey, the atmosphere being at times quite oppressive with its perfume; but with the exception of those few days both before and afterwards till the 10th of August, there has been no storing up of food; in fact, all cells not sealed up were gradually becoming emptied; but on the 11th July, up to that excessively hot day (14th of August), and at intervals to the 25th of August, they again began to collect from the white clover, and many cells were completed and closed.

I really think it takes upwards of a quarter of a century for a bee-keeper thoroughly to understand the different phases of bee-keeping, and to complete the cycle of bee years; for I never remember any season more perplexing, even to veteran amateurs, let alone those unfortunate beings who may, perhaps, for the first time have commenced with one or two stocks in the spring. For their consolation let it be known that a certain party has kept bees more than twenty-five years, and never remembers such a year as this. One thing I have learnt—viz., that Ligurian bees beat the ordinary black bees hollow; the stock I had of my friend Mr. Woodbury last year is the only hive which swarmed, and that twice, out of eleven hives with which I began the spring. The queen's extraordinary fecundity is such that she soon fills the hive with workers. Then, again, her progeny have such activity, spirit, and dash in them that they are always the first at work, even on a bad morning. Look at the entrance—no loitering; in and out like rockets, yellow-coated fellows vigorously flapping in regular lines, through which the workers pass with wonderful activity, and evidently "meaning business."

I have also learnt that a hybrid race from a Ligurian queen impregnated by a common drone has the same extraordinary vigour, and the queen the same wonderful fecundity, for the hive from which the old Ligurian queen swarmed is as full of bees as most of the other hives which have never swarmed at all, and this after having swarmed twice!

I have this year again proved the duration of the life of the working bee in the summer season. I then proved it to be in no case more than two months, and owing to the young virgin Ligurian queen having been impregnated by a common drone between the 19th and 24th of June, and the hybrids manifestly appearing in numbers about the 20th to the 25th of July, I

was at once enabled to see the distinction between them and the old Ligurian workers left behind when the old queen swarmed. These latter entirely disappeared about the 20th of August, as there could have been no pure Ligurian eggs laid since the 9th of June, when the old queen left the hive. Up to the first week of August I used to see now and then a pure Ligurian, but in that week gone, dragged, ragged-winged condition denoting hard work and old age; these were rapidly eliminated by their more juvenile brethren, and now I do not find one.

As early as the 13th of May two of my most favoured stocks began every cold morning to turn out drone brood, and this continued, more or less, in all my hives (except the Ligurian), until about the 25th of June, when the limes beginning to blossom, and the warm weather setting in, they gave it up for a more profitable occupation. So certain was I that this early drone-killing would hinder swarming, that in most cases as it occurred I at once put on supers for honey-storing, taking the risk of the queen laying her eggs therein. My usual time for this in ordinary years being about the 10th of June, I have never been wrong in taking it as a certain sign of non-swarming when a hive at any season turns out their drone brood. The unusually cold and sunless May and June was undoubtedly the cause of this early slaughter this season, and there can be no question that it had an equal effect in retarding worker egg-laying by the queen.

I never remember the white clover blossoming, or continuing to blossom, so late in July and August as during the present year. In ordinary times it begins to open with us about the 28th of June, and is all over by about the end of July at latest. I did not see any till the 5th of July; and on the 15th of August it was in full blossom all over the fields and in great abundance, and did not fail the bees for at least ten days later. Altogether it has been a most anomalous season, and one I hope never to see again.

Did ever any of your correspondents keep what I call a "swarm barometer?" It is simply a hive or two which have had comb cut out, all excepting two or three small pieces at the top. These I generally keep some little distance away from the apiary; and almost invariably when any of my hives are about to swarm, I have notice of the same at least a week beforehand. In the case of the Ligurians this year I was forewarned of both my swarms by the fussy dodging in and out of these "empties" by the yellow-coated fellows. On the swarms taking place these are immediately neglected. I have had them taken possession of direct by a swarm several times, so it is as well not to have them in the middle of the apiary for fear of a scrimmage. My first Ligurian swarm this year on the 9th of June was so taken up with examining these "barometers," that more than an hour after I had hived the swarm and everything was quiet, all of a sudden they began to come out, and at once I saw what they intended. The swarm had settled about 40 feet from the apiary, and in a few minutes a steady stream began to pour into one of these empty hives, which had a small quantity of comb in it. I was not going to be *done* in this way, as in the evening I intended to put them into a Woodbury hive and the comb might have bothered me, so I quickly whipped up the hive into which they were pouring and replaced it with the hive into which they had first been placed and which was now deserted, and they evidently did not see the difference, for they just settled into it at once. I cannot help thinking that in most cases with prime swarms, and sometimes with second swarms, the bees look out for a suitable habitation, and if found would, if left alone, proceed straight to it after resting on a bush for an interval. As in the case of the ordinary weather barometer, this "swarm barometer" must not be implicitly relied upon; but like its congener, with other symptoms superadded it does afford indications which an attentive observer should never neglect.

I write this on the 2nd of September, and it is only during the last week that my Ligurians have ceased sealing up cells with honey—a thing unprecedented at this time of the year, where heather does not exist.—A BLACKHEATH'AN.

OUR LETTER BOX.

CRAVEN POULTRY SHOW.—"The correspondent who sent you an account of the Craven Show, has made several mistakes—viz., First prize to Black Hamburgs was awarded to me, and not to Mr. Beldon; also, I obtained First and Second in Cochinchina chickens, Mr. R. Smith getting nothing.—CHARLES SIDGWICK, Ryddlesden Hall, Kelghley."

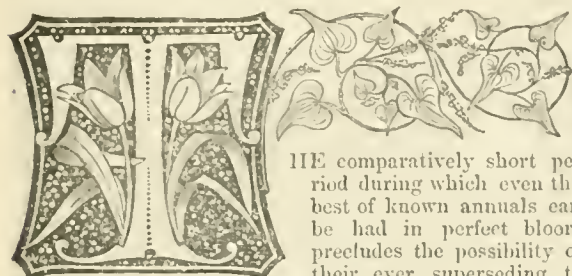
SKIPTON POULTRY SHOW.—"You say in Ducks, Any other variety, Mr. Beldon was first, which is a mistake, as both first and second were awarded to me.—JAS. DIXON, North Park, Bradford."

WEEKLY CALENDAR.

Day of Month	Day of Week	SEPTEMBER 19—25, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.	
			Day.	Night.	Mean	Days.	m.	h.	m.	h.	m.	h.		
19	Tu	Day breaks 3.45 A.M.	67.4	45.0	56.2	19	42	af 5	6	af 6	21	af 9	41	af 11
20	F	Belfast Horticultural Show.	62.2	44.1	53.1	18	41	5	3	6	9	10	after.	22
21	S	Royal Horticultural Society, Promenade.	66.4	45.3	55.8	22	45	5	1	6	5	11	51	1
22	SEN	14 SUNDAY AFTER TRINITY.	66.7	45.1	55.9	19	47	5	58	5	morn.	45	2	21
23	M	Autumn commences.	66.4	46.1	56.2	20	49	5	56	5	10	0	31	3
24	Tu		66.1	44.3	55.2	18	50	5	54	5	21	1	10	4
25	W	Twilight ends, 7.47 P.M.	66.0	43.3	54.6	19	52	5	52	5	35	2	44	4
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From observations taken near London during the last forty years, the average day temperature of the week is 65.9°; and its night temperature 44.7°. The greatest heat was 89°, on the 25th, 1832; and the lowest cold 32°, on the 20th, 1810. The greatest fall of rain was 1.21 inch.

BEDDING ANNUALS IN THE VICTORIA PARK, GLASGOW.



THE comparatively short period during which even the best of known annuals can be had in perfect bloom precludes the possibility of their ever superseding, to

any extent, our present class of bedding plants. But there are many gardens, both public and private, where, owing to want of means and accommodation, only a hundred of these can be propagated and wintered for every thousand required, and the result is, that when bedding-time comes, these few hundreds are distributed over so much space that no striking effects can possibly be produced until far on in the season.

Now, for places of this class—and they are more plentiful than pleasant—a selection of good annuals is invaluable for filling up large beds and borders in situations of secondary importance, places which otherwise swallow up any amount of good plants without ever looking more than half-furnished, while the more prominent beds are robbed, the plants being dotted here and there over them scarcely with speaking distance of one another.

It is, then, plainly the duty of every one at all interested in these matters to gather up all available facts that may in any way lend to the simplifying, and, consequently, to the diminishing of the expenso and trouble attending flower-garden operations.

Some striking examples of what can be done with the simplest of materials may at present be seen in the Victoria, or, as it is often called, the South-side Park, in the suburbs of Glasgow. Although not intending to give a detailed account of these grounds, I may state that they embrace an area of about 150 acres, and are laid out, if not in a style the most elaborate, yet with great taste and judgment, and are eminently adapted to the wants of the working part of the community as a place of promenade and recreation.

Entering from the city side, and ascending the first terrace by a massive flight of stone stairs, the first thing that attracts the attention in the way of bedding is a long narrow ribbon-border, about 260 yards in length, by not more than 4½ feet in width, occupying part of the space between a broad 20-feet walk and the top of a terrace; it is composed wholly of annuals, and, taking that into consideration, is one of the most perfect things of the kind I have ever seen. The middle row is purple Candytuft, on each side of which is a row of Mignonette, and the two outside rows white Alyssum. The soft beauty of this arrangement, so free from violent contrast, yet so striking, needs only to be seen to be admired. It reminded me of

a somewhat similar arrangement of a short ribbon-border I met with in the neighbourhood of Brixton a few years ago; it was also open on both sides, the centre row scarlet Pelargoniums, the next pair of the grey Coleus Blumei, and edgings either of white Centaurea or Cineraria, I cannot remember which; but of these two borders, both beautiful in my estimation, that composed of homely annuals was by far the more effective; only it must be borne in mind that little more than five or six weeks of perfect bloom can be calculated upon in the one case, while the other is more or less attractive from the day of planting-out until destroyed by frost, which is, in some localities at least, a period of nearly as many months.

The next feature worthy of notice is a series of oblong, alternated with circular, beds. The latter not being filled with annuals, but with Pelargoniums, Calceolarias, &c., and some of them edged with Chrysanthemum Sensation, although looking beautiful, need not be particularly described. The others, which are pretty large, are filled in the centres with purple and next with white Candytuft, and edged with the blue *Kanfussia amelloides*. In some of the beds this latter is rather a failure, owing, no doubt, to the dull sunless weather, always so prevalent about Glasgow, and which has seldom been more so than during the last summer.

The sheets of bloom these beds of Candytufts produce is such as no Verbenas can rival, and when viewed near at hand are almost painful to look at; but when seen at a distance, and in conjunction with other objects more soberly graceful, they have a gay and pleasing appearance.

The rock upon which so many split who attempt the bedding of annuals seems to be the employing of too many varieties, and the taking on trust from seedsmen or others the heights and times of blooming of many with which they are themselves not intimately acquainted; whereas the fewer that are employed the better, provided the requisite colours be obtained, and none should be extensively used which have not been previously tested on a small scale, in as nearly as possible the same soils and exposures they are intended to occupy when bedded; the heights, colours, times of coming in and remaining in bloom can then be carefully noted, together with the general habits and peculiarities of each sort, and the whole well digested and arranged for the next season, when the desired effect can be counted upon as a certainty, so far at least as human foresight is concerned.

From the middle of August, and as long after as possible, is the season when many flower gardens in the country are wanted to look their best, and the hardier annuals sown so as to be in bloom at that time will out-wear our tender and expensive bedding plants, and look fresh and passable long after these have been cut down by early frosts.

But it is from the economical stand-point that the merits of annuals are seen to the best advantage; for although I would be one of the last to advocate their adoption in places where better things could be provided, yet when it comes to be a question of these or nothing, annuals or a nearly total absence of all show, half-apologised for, per-

haps, by a mere handful of bedding plants, then I would not hesitate to use them with a very free hand.

In mentioning the blue *Kaulfussia* I am reminded of *Anagallis Monelli*, a blue half-hardy herbaceous plant, which another of your correspondents recommended to me last spring for bedding. Never having seen it used for that purpose, with some trouble I obtained half a dozen plants, and put them out, but have not yet had a dozen flowers upon the whole of them. It is, however, an old favourite with many, and a really beautiful thing for pot-culture in a greenhouse.—*AYRESHIRE GARDENER.*

SEEDLING PEACHES AND NECTARINES.

EARLY in August we had the privilege of tasting some of the early kinds of Peaches raised at Sawbridgeworth. The very early kinds were past as they had ripened in the middle of July, but some few of what may be called the second series were ripe. And here we have to notice a curious physiological fact—nearly all the seedling Peaches and Nectarines have a smack of the Stanwick Nectarine flavour. This is not only the case with those purposely crossed with that sort, but nearly all the others, as if the pollen of this foreign variety possessed some peculiar vigour, so as to impregnate to a certain extent all the blossoms in the house.

Not only is it by the direct crossing or the influence of the pollen communicated in other ways, that the Stanwick has infused its flavour into the first produce from the cross, but even in the second and third generations is this influence exhibited, even where direct crossing has not been practised. All through these new varieties of Peaches and Nectarines which Mr. Rivers has been so fortunate in raising does this flavour of the Stanwick pervade, with all the persistence of a subtle essence.

We were particularly attracted by the following—a seedling *Elruge Nectarine* rather larger than its parent, and ripening at the same time, is a veritable Stanwick *Elruge*, so strong is the combination of flavours. A Peach raised from Rivers's *Orange Nectarine*, had the most exquisite flavour—a combination of the Stanwick and the *Pitmaston Orange Nectarine*. A seedling *Early York Peach*, with glandular leaves, had also a mixture of the Stanwick Nectarine with the peculiar and delicious flavour of the *Early York Peach*; and a very remarkable early Nectarine raised from the *Early Albert Peach*, seemed to be most original in its combination of the Peach and Stanwick Nectarine flavour. Many other novelties presented themselves among some hundreds of seedlings, to such an extent that Mr. Rivers finds it difficult to select the kinds most deserving of cultivation. He has, however, as a general rule, resolved to bring out and name only those kinds that are very early and late, or any seedling like the glandular *Noblesse* and glandular *Early York Peaches*, that have all the fine qualities of the parents with an improved habit.

We were much interested in the curious effect of one cross. Some three or four years since Mr. T. F. Rivers fertilised the flowers of the *Leopold Peach* (a late sort with large pale flowers) with the pollen of the *Chinese Double Crimson Peach*, previously removing the stamens from the blossoms of the former. The effect is very remarkable. The flowers of the seedling are large, single, and of the colour of the *Leopold*, with no crimson tint, the only feature that attracted attention being the fine, stout, *Camellia*-like petals, and regular cup-shaped corolla. It is, therefore, most curious and interesting to find all the fruit on the tree of the same form, size, and nature as those given by the *Double Crimson Chinese Peach*, being compressed and pointed, with but little pulp—in fact, more like an *Almond* than a Peach. Such a remarkable effect of the power of the male parent in changing the nature of a fruit only, leaving no trace of its form in the leaves and flowers, is a physiological fact, perhaps worthy of record.

From this, and from what we have already stated with respect to the influence of the pollen of the Stanwick Nectarine, and also from what we know of other instances of hybridisation, we learn that the more distinct either of the parents is in any of their characteristics, the more apparent will be the effect on the progeny. It would be instructive if Mr. T. F. Rivers were to reverse the experiment, and see what the result of the pollen of *Leopold Peach* would be on the *Double Crimson*.

But after all, when we examine the subject physiologically, there is nothing so remarkable in this result of hybridisation as at first sight appears. When we consider that the *Almond*, the Peach, and the Nectarine, are all mere forms of each other,

and in themselves constitute what is usually termed a species; that they differ only in the Peach and Nectarine having a greater development of more succulent cellular tissue in the envelope of the fruit than the *Almond* has; and that the fruit of the Nectarine differs from that of the Peach in having a smooth instead of a downy skin, and as these characteristics are so variable that each has been discovered on trees of the other without artificial hybridisation, we are led to the conclusion that they are mere varieties of one more fixed form—the *Almond*, and, consequently, may readily be expected to cross the one with the other.—II.

CULTIVATION OF VIOLETS IN POTS.

To have Violets, "deep blue Violets—April's loveliest coronets," with certainty and at an earlier season, they are grown in pits and frames when the flowers only are the object, and in pots for decorative purposes in the greenhouse and the conservatory. On this latter mode of culture I now tender a few hints, hoping to meet the requirements of more than one of your readers.

After the plants have flowered they will, under favourable circumstances, commence growth, and send out runners in all directions. To encourage the rooting of the runners a few good waterings should be given, especially if the weather prove dry during the early part and during May, and the last week in April or first in May an inch of fine and moderately rich soil should be placed around the old plants, and for some distance all around them, as this benefits the old, and secures the better and more speedy rooting of the new plants or runners. When the latter are nice little plants, with a moderate amount of root, they should be detached from the old plants and be taken up carefully, so as to preserve any roots they may have formed or be in course of forming, and be potted into three-inch pots, using a compost of loam from rotted turf two-thirds, and one-third leaf mould or very decayed manure.

After potting they should be placed on ashes in a cold frame, and a good watering given. The lights are then to be drawn on close, and a mat or mats thrown over them to protect the plants from the sun. The lights should be kept down close, and the plants be sprinkled overhead with water every morning through a fine-rose watering-pot, the lights being drawn on as before, and shade given from sun. In the course of a week the plants will have commenced rooting into the soil, and the lights should be tilted at the back and kept open until 3 or 4 p.m., when a gentle watering overhead may be given and the lights drawn on close, the mats being continued over the lights until the sun's power is lessened, or until 6 p.m., when they are to be withdrawn. This is to be continued for ten days or a fortnight, increasing the openings caused by the tilting of the lights from a little to a considerable, or their full extent by the fortnight's end, lessening the shade by degrees, but not so much so as to cause the plants to flag, and keeping the soil moist, but not so wet as to become sodden, and sprinkling overhead in the morning to maintain a moist atmosphere.

Under the above treatment the plants will be established in a fortnight or three weeks, and become capable of enduring sunshine without flagging. The lights are then to be drawn down, and kept off day and night, the plants being watered overhead very morning early, and again in the evening, unless the weather be showery, when it will be unnecessary. The soil of the pots should also be examined, and any that are dry be watered.

Under such conditions the plants will grow vigorously, and by the end of June have filled the pots with roots. They may then be repotted into pots 4½ inches in diameter, in a compost of rather strong loam from turves a few months old, and very old manure or leaf mould (two-thirds loam and one-third leaf mould or manure). Good drainage is an essential, and a sprinkling of half-inch bones over it will not be lost upon the plants. The plants should be kept well supplied with water, and be watered overhead every evening during dry hot weather with soot water, made by placing a peck of soot in a hogshead and pouring thirty gallons of rain water over it, stirring it well up, and allowing it to stand a few days to clear. An east or west aspect is the best of positions, and a warm south dry aspect worst of all for the plants. The pots may be three parts plunged in coal ashes and placed on a bed of the same, allowing sufficient space between the pots for the growth of their foliage, and to expose it fully to light and air. The runners should be kept closely stopped up to July.

Under favourable circumstances the plants will grow and spread much. It is well not to restrain their spreading much, but to allow them to grow at will until the commencement of September, when all runners should be removed; and their removal at this season will tend to the increased vigour of the main plant, and the danger of a gross growth be thereby obviated; whilst the removal of all superfluous growths will tend to the perfection of the growth and the formation of a well-developed crown through the freer exposure to air and light.

Early in October the plants should be repotted into pots 6 inches in diameter, using a compost of rather strong loam from rotted turves two-thirds, and one-third leaf mould or old cow or sheep dung, and to every peck of this compost adding a quart of half-inch bones. The compost should be broken and made rather fine, and the plants (being turned out of the pots), need not have any of the old soil removed, nor the ball interfered with in any way, except to remove the pieces of pot used for drainage, leaving the sprinkling of bones at the bottom, and loosening the sides of the ball a little with the hand. Good drainage being provided, a few half-inch bones over it is a good thing; and the removal of the surface soil if at all overgrown with moss (being replaced with fresh soil), will induce fresh growth. The soil should be made rather firm around the ball, but tight potting is not to be practised in its strict sense. After potting the plants should have a good watering, and be placed in a cold frame in a warm sunny situation, affording them a slight shade for a few days if the days are bright and the sun powerful, until they become established. The pots should be placed on coal ashes. Notwithstanding that the plants are placed in a frame, it is desirable that they have abundance of air; no more water than sufficient to keep the soil moist, but under no circumstances wet; no further use being made of the lights than to afford them protection from heavy rains and frost. In frosty weather the lights should be drawn on, and a covering of mats given in addition to that of the glass; and during wet mild weather the lights should be drawn on, but they should be tilted at the back.

Thus treated the plants will be fine and strong, and many of them showing evidence of bloom by November. The most promising may then be taken into the greenhouse, and be placed near the glass in a cool airy situation, care being taken not to overwater, as nothing is more baneful to Violets than a sodden and sour soil; at the same time it is necessary that the soil be kept moist, and that no water be given until the soil becomes dry, then enough given to show itself at the drainage.

A few plants draughted into the greenhouse from the frame at intervals will keep up a succession of plants for blooming, and in a cool airy position they will bloom for a great part of the winter and early spring.

After blooming, the plants should be planted out-doors, having hardened them well off either in or out of the pots in a bed of good rich soil, and about 1 foot apart, in a rather shaded yet open situation, where they should be well supplied with water, and be frequently watered overhead. Any choice kinds may have the protection of a frame, being potted towards the close of April into four-inch pots after the reduction of the ball and the removal of most of the old soil, keeping them rather close and shaded for a few days until they recover the potting, after which they are to be treated in the same manner as described previously for runners, transferring them to their blooming pots in September, and, moving to a frame at that season, they will bloom much more surely than younger plants and during greater part of autumn and winter.

There are other and more simple means of growing Violets for blooming in pots. The runners are taken off when sufficiently rooted, which is usually at the close of May or early in June, and planted in an open situation in ground well dug and otherwise properly prepared by the addition of leaf mould or thoroughly decomposed manure, but not so much of the last as to make the soil very rich, as when this is the case the plants grow luxuriant more than sturdy, which is essential for a well-developed head or crown. They may be planted in lines 15 inches apart, and 9 to 12 inches from plant to plant. They are best planted in showery weather; or, if the weather be dry, a slight shade given from bright sun and watering will be beneficial and necessary. The after-treatment is keeping the soil well stirred between the roots, the giving of water during dry periods, and the removal of all suckers and runners; but it is not well to keep the latter very closely cropped off, as by allowing them to grow to some extent the plants will the sooner become established, and form a better root and head. The

runners therefore should be allowed to grow for a time, and then remove all close. And this holds good through the season. Allow the runners to grow some length, but do not allow them to root nor to grow until they cannot be distinguished from the original plants, for that is going to the opposite extreme. Early in October the plants may be taken up with a ball and be potted in pots that are of a size sufficient to hold them comfortably. After potting a good watering should be given, and the plants placed in a cold frame, keeping them rather close and shaded for a few days until they recover the potting; afterwards they cannot have too much air nor light, with protection from frost and cold heavy rains. It is hardly necessary to add they will be in a fit state for placing in a cool house by November, and with a very moderate amount of forcing they will flower at an early season—a succession being kept up by placing more within the house at intervals of a fortnight or three weeks, or longer or shorter intervals, according to the demand.

It is not unusual to apply the term "Forcing" to cultivation of Violets in pots. Now, Violets are of all plants that I know most impatient of heat, and none are sooner injured by it. To bring on Violets rapidly is only seeking a tuft of leaves and a show of buds that turn yellow but do not form flowers. They should not, therefore, be subjected to a high temperature. A cool greenhouse from which frost is no more than excluded is a sufficient excitement to begin with; and at no time ought the temperature to exceed 45° to 50° at night, and not that until the plants have been a fortnight, or from that to a month (the longer the better), in a cool house. The lightest and most airy situation and close to the glass is the best place for them. They ought not to be at a greater distance from the glass than 15 inches, and need not be nearer than 9 inches. Prior to placing the plants in the greenhouse or other house the pots should be clean washed, the surface of the soil stirred, with a piece of wood removing any moss, and adding a little fresh soil if necessary. All the old and yellow leaves should be nipped off; and any that show traces of red spider should be dusted on the under side with a powder formed by mixing equal quantities of dry soot and flowers of sulphur together.

Violets are very subject to attacks of red spider both in the open air and under glass. The preventive is to keep them well supplied with water, and to paint the inside of the frame or pit with a mixture of soot and sulphur brought to the consistency of cream with water. The worst infested leaves should be nipped off, and the others dusted with soot and sulphur in equal parts.

Mildew is occasionally troublesome. The leaves most attacked should be nipped off, and the whole of the plants be dusted with flowers of sulphur.—G. ABBEY.

EXHIBITION ROSES FOR IRELAND.

"W. H. M." wishes me to name from forty to fifty varieties for dwarfa and for exhibition, for the banks of the Shannon. He says, "The average rainfall is 46 inches, and the soil is cold, with a gravelly subsoil." Under such circumstances I recommend the Manetti stock, and such Roses as are hardy and free bloomers.

Achille Gonod, Alfred Colomb, Anna Alexieff, Baron Adolphe de Rothschild, Broune Prevost, Caroline de Sansal, Charles Lefebvre, Charles Ronillard, Comte de Nanteuil, Comtesse Chabillant, Dr. Andry, Duc de Cazes, Duke of Wellington, Eugene Verdier, François Lacharme, Gabriel Peyronny, Gloire de Vitry (own roots), John Hopper, Jules Margottin, Lady Suffield, La Duchesse de Morny, La Ville de St. Denis, Lord Macaulay, Madame Boutin, Madame C. Craplet, Madame Boll, Madame C. Wood, Madame Clemence Joigneaux, Madame Julie Daran, Madame Freeman, Madame Moreau, Madame Victor Verdier, Maréchal Vaillant, Marguerite de St. Amand, Maurice Bernardin, Monsieur de Montigny, Pierre Notting, Prince Camille de Roan, Sénateur Vaisse, Souvenir de Dr. Jamain, Vicomte Vigier, Victor Verdier, W. Griffiths, Baron Gonella, Baronne de Maynard, and Marguerite Bonnet.

The following have been blooming splendidly on the Manetti stock here—Sœur des Anges, Duchesse d'Orléans, Madame Vidot, and Madame Rivers. They are superb here, but I must leave them "an open question." Yellow Roses are essential for a good show-box. I recommend Gloire de Dijon, Céline Forestier, Triomphe de Rennes, and Maréchal Niel. The following Tea Roses, when well grown, will greatly help towards a prize, they are most beautiful Roses:—Adam, De-

vonienensis, Madame Willermoz, Souvenir d'un Ami, and Souvenir d'Elise.

In further reply, for his cold land, guano is better than ground bones; for hot burning soils bones are very good. Superphosphate and nitrophosphate are good for Roses put on at any time. Fresh cow manure is the best of all.—W. F. RADCLIFFE.

VINES AND VINE BORDERS—NATURAL TEMPERATURES.

So near to us as eastern France, a basin of the pulp of the Grape and a slice of brown bread is often a most acceptable meal to the weary pedestrian. Not only in France, but in Spain and Portugal, wherever the soil is too strong or gravelly, too poor or too steep for ordinary cultivation, the Vine becomes the chief support of the husbandman, and the juice of the Grape is as much a necessary of life to the Vine-dresser as milk is to an English peasant in a dairy district. If a tropical heat and a rich soil were so necessary to the Vine, Palestine would not have been so celebrated for its vineyards. Its rocky hills and stony valleys were covered with the Vine, the Fig, and the Olive; its plains with Wheat and with Barley. It was a land flowing with milk and honey because of its teeming population and the peculiarity of its climate.

I have given some idea what this climate is from March to September, let us now see what effect it has upon the Vine when the work of the wine-press is over. The hills and valleys of Canaan remain the same in their physical condition as when Joshua and his companions rested in the valley of Esheol on their return to the camp at Kadesh. The rains are still as abundant as when the swollen river of Kishon swept away the host of Sisera. It is these rains that, falling in the autumn upon a soil warmed by three months of a rainless summer, produce such an astonishing growth in the vineyards. The bark of the spring shoots splits open to make room for the layers of new wood, which continue to be deposited till the buds, which were bare and prominent in September, become nearly flat, owing to the increase in the circumference of the shoot, when the gradually decreasing temperature causes the leaves to fall in December.

A continuous growth of nine months, year after year, soon makes the Vine assume the proportions of a timber tree. Chardin mentions some with trunks almost too large for a man to encompass with his arms. One month after losing their leaves the Vines of Palestine, growing within five hundred miles of the tropics, begin to feel the power of the ascending sun; and although their advance is but slow, still there is an advance similar to that which may be observed in the Honey-suckle in the months of January and February in our own country. During seven months of the year the hills of Judæa are subject to heavy rains. For three months more they are refreshed by dews so copious, that Maundrell says, "We were instructed by experience what the holy psalmist means by the 'dew of Hermon,' our tents being as wet with it as if it had rained all night." In this climate the Apricot, the Peach, and the Plum grow with as much vigour as the Vine, and the latter may be seen side by side with the Hawthorn and the Laurel.

I have said that the Vine in the valley of Esheol begins its growth in March. The amateur Vine-grower adopting Mr. Thomson's treatise for a guide will start his Vines about the same time. As soon as the shoots are half an inch long he will withhold all moisture, except in the form of vapour. When the bunches are in flower (about seven weeks after the bursting of the buds), the temperature will have to be maintained at from 70° to 95°. After the ripening of the Grapes all second growths are to be removed, and the Vines allowed to go to rest. Under this treatment the Vine ripens its fruit in seventeen weeks, during ten of which it is subject to the exciting temperatures of the tropics, supplemented by an additional daily excitement of six hours more daylight than tropical plants can possibly receive. In seven months the Vines would be at rest, and from October to March—a period of five months, they would remain in an inactive, torpid, and injurious condition. If planted in a well-drained inside border they would receive three waterings. If the roots were in an outside border aslight mulching would keep them sufficiently moist.

Now, the rainfall in countries having the same temperatures as those recommended by Mr. Thomson varies from 6 to 12 feet; and the temperature of the earth at 1 foot from the surface is equal to the mean temperature of the air.—(*Boussingault in the "Annales de Chemie et de Physique."*) Von

Humboldt has given the mean temperature of the earth at Guayaquil at 78.80° Fah., and that of the air at 78.08° Fah. At Zupia the temperatures are 70.70° Fah. and 70.70° Fah. respectively. A Vine in Guayaquil and another grown according to the recommendations of Mr. Thomson, would have equal advantages in regard to atmospheric heat; but there would be a difference in the temperatures of the soils surrounding their roots of nearly 20° Fah.

I hope Mr. Thomson will not think I oppose his book from any prejudice against what he has written. I am anxious to obtain all the information I can about the cultivation of the Vine, but I am utterly unable to understand Mr. Thomson's treatise. But I can assure Mr. Thomson that if I believed rest would restore to the Vine its exhausted energies—if I believed in stored-up sap available for the support of the Vine before root-action commences, I should be perfectly prepared to defend my own statements.—H. S.

STORING POTATOES.

WHAT is the best treatment after a severe attack of disease? Divers and contradictory are the recommendations one gets here, and all based on the most conclusive experience! More especially are the opinions opposed as to the time store Potatoes should remain in the ground before they are taken up, say such sorts as Regents, Flukes, Rocks, &c.—CORNUBIA.

[Long experience and inquiry justify us in recommending that Potatoes are best preserved if placed in alternate layers with dry sand in a cold dry cellar or outhouse. On similar grounds we recommend Potatoes to be taken up for storing during dry weather immediately the leaves have died to a considerable extent. Leaving the ripe tubers in the soil, exposed to vicissitudes of temperature and wet, is the most effective mode of inducing disease.]

HOTBEDS.

A CORRESPONDENT of the *Times*, who has lately visited France, strongly recommends our imitating the French practice of placing frames on the ground and surrounding them with dung, instead of placing them as we now do upon the dung. Now, in the French system, the upper surface of the dung is used as a path between the rows of frames, and is about a yard wide. It will, probably, be somewhat under a yard deep. So where the frames are few, and these well covered in on four sides, there cannot be much saving in the article of dung; and as to heat, the system proceeds on the supposition that heat does not exert its chief force vertically, but laterally, which is contrary to ordinary experience. The upper side of the French beds must be perpetually cooled by rains and evaporation, while ours are under glass. Moreover, our elevated sides, like the sub-tropical mounds, receive the rays of the sun. The only fact adduced in proof of the superiority of the French system is, that they ripen Melons freely, although the glass is removed during the last process of ripening; but this may be attributed rather to the French sun, for according to London, the Melon succeeds in the open air in latitude 43°, and, therefore, Paris is only 5° 50' north of the point where artificial aid may be dispensed with altogether.—G. S.

WHITE MARSEILLES AND DE LA MADELEINE FIGS.

THE Fruit Committee of the Horticultural Society, 3rd of September, tasted the White Marseilles and the De la Madeleine together. The latter is described, but the description would suit the White Marseilles exactly. It has hitherto been considered that the two names were synonyms of the same variety, and it would be satisfactory to learn whether such be not the case. The general descriptions of White Genoa and Bourjassotte Blanche are so similar, that when the Committee pass in review these fruits, it is hoped that they will come to some determination of this point also.—G. S.

[White Marseilles and De la Madeleine are quite distinct, the latter being synonymous with Angélique. The difference between the two is in the fruit of the former being rather above medium size, rounded, skin pale green, flesh greenish white; while that of the latter is smaller, flattened like an Onion, skin clear yellow or straw-coloured, flesh pale under the skin,

tinged with clear rose towards the centre. The foliage of *De la Madeleine* is also very distinct, being nearly entire, but much serrated or toothed, and wavy in outline.]

VIOLA CORNUTA AND VIOLA LUTEA.

I wish for information about the lasting qualities of *Viola cornuta*. From statements made from time to time in the *Journal* by Mr. Wills, Mr. Bennett, and others, I was led to believe it to be a good bedding plant; consequently I procured some cuttings in September of last year, struck them, kept them in a cold frame all winter, and planted them out in May with the other bedding plants. They began to bloom immediately, and continued to do so, so that I was so pleased with it that I have taken cuttings from the plants, also picked all the seed-pods as they ripened, to increase my stock for next summer; but to my dismay, about the 20th of August the flowers on them began to be fewer, and they almost ceased blooming by the 1st of September; and now (the 10th), they are in the same state—not one bloom in a foot all over the bed. Now, I want to know if this *Viola* usually ceases blooming thus early? If so, I shall discard it altogether as a bedding plant, for it mars the whole, all the other bedders being in gaiety—I mean *Lobelias*, *Purple King* and other *Verbenas*, *Calceolarias*, and various *Pelargoniums*. I should have said mine is Mr. Bennett's variety, as it came from Osberton Hall. Do you know if the *Viola lutea* is lasting in blooming?—DONSET.

I have not found *Viola cornuta* to cease flowering on any occasion, whether the weather has been wet or dry, hot or cold, during the summer and autumn months. No doubt the sudden failure complained of by "DONSET" is owing to the want of food. The plant, being such a free and profuse bloomer, naturally requires plenty of food in the shape of manure to sustain it. The way to have it in full beauty all through the summer is to make the ground it is to be planted in very rich with manure, trench the beds over in the autumn to the depth the soil is good, place at the bottom of every trench about 2 inches of good manure, and, after the soil has been trenched over in this way, to spread some leaf soil or well-decayed manure over the surface of the bed; then with a good digging-fork mix it up with the surface soil. This will encourage rapid growth soon after the plants have been put out. The manure placed in the bottom of the beds will supply the plants with food later on in the summer and autumn. If "DONSET" and other correspondents of "our *Journal*" will only take this trouble in preparing their beds before planting-out time arrives another year, they will have the satisfaction of seeing this gem of the flower garden constantly in bloom from April to the middle or end of October. When the soil is light and sandy, and shallow, in dry seasons it is absolutely necessary to carry out the deep-trenching system recommended above; and instead of placing only two inches of manure at the bottom, it will be necessary to put it in four or six inches deep; and if there is a long continuance of dry weather frequent waterings will be required, sometimes with manure water. In watering, the plants should not be watered through a rose as is sometimes done, but the water should be carefully conveyed to the plants by means of a small water-pot without the rose on. The beds by these means can be well soaked without spoiling the plants' beauty.

I have had letters from all quarters complaining of the failure of Mr. Bennett's variety; and with all due respect, I must beg to differ from him as to what he has lately said about the two varieties. I maintain that it does not require any one with nice discrimination to detect any difference between the two varieties *Mauve Queen* and *Purple Queen*, even when Mr. Bennett's favourite is growing in a favourable situation—namely, where the plants are protected from the direct rays of the sun. In such a position *Purple Queen* is a gem, but from my experience of it this season, and from the numerous letters I have received, I am led to believe that it will not give satisfaction in a situation fully exposed to the sun. In a letter I received a short time ago from Mr. Smith, of the Kew Botanic Gardens, he tells me that *Purple Queen* is constantly dying off, and has to be replaced by other plants, which makes it look ragged and uneven, whilst not a plant of *Mauve Queen* has gone off. He says both have received the same treatment, and *Mauve Queen* is admired by thousands. I mentioned some time ago that I planted in the spring a row of *Mauve Queen* and a row of *Purple Queen*, a walk only dividing them; and that they were both planted on the same day, in the same soil,

and under precisely the same conditions. *Mauve Queen* soon became beautiful, and has remained so all through the season, whilst *Purple Queen* has been taken away and replaced by a row of *Mauve Queen*. The remnant of the plants of *Purple Queen* were then carefully planted in good prepared soil on a north border; but since then they have been rapidly dying away, and now, out of about six hundred plants, there is not a dozen healthy plants left. The position in which the two rows were planted was fully exposed to the sun, facing the south.

About six weeks ago I received an invitation from Mr. Tyerman, of the Liverpool Botanic Gardens, to come and see the *Violas* there. I went, and a most pleasing sight they were, and well worth a long journey to see. There Mr. Bennett's variety was in splendid condition; but it was planted in a moist place on the east side of a tall Thorn hedge. At the back of it was a row of Mr. Tyerman's variety of *montana* in splendid condition. In this shady position Mr. Bennett's variety was quite at home, and the beautiful purple shade of its flowers was seen to great advantage in front of the fine row of grey and mauve produced by Mr. Tyerman's *montana*. The effect thus produced was very chaste and beautiful, and when viewed from a little distance it was most pleasing; but on a nearer inspection the difference in the habits of the two varieties, *Mauve Queen* and *Purple Queen*, could at once be seen. *Mauve Queen* has a nice erect style of growth, whilst *Purple Queen* has a more procumbent habit. The leaves are also rounder and more deeply serrated on the edges. *Purple Queen* when planted in rows or beds has a tendency to spread on the ground, leaving its centre naked, whilst *Mauve Queen* is constantly pushing up young shoots from the centre, which are no sooner formed than they are covered with their pretty mauve flowers in great profusion.

In another part of the Botanic Gardens I saw a splendid bed of Mr. Bennett's variety. This was in fine condition; but, like that described above, was partially shaded, and being near a fountain which is constantly playing, was kept moist.

In another part of the garden, also partly shaded, Mr. Tyerman has a group of beds all filled with *Violas*. Here were to be seen *Mauve Queen*, *Purple Queen*, one or two varieties of *cornuta* slightly differing in colour, also beds filled with the beautiful *V. lutea* and *V. lutea grandiflora*, a seedling raised by Mr. Tyerman from *lutea*, with flowers much larger, and altogether a great improvement on *lutea*. There were also two beds of a very pretty lively-looking seedling, which we named *V. versicolor*. This I thought exceedingly pretty. There *Mauve Queen* and *Purple Queen* were equally beautiful; but the same fault above alluded to in *Purple Queen* was still apparent—namely, its showing in the centre of each plant too much space that was not covered with flowers.

The beds of *Viola lutea* were magnificent. I may truly say that this is the finest yellow bedding plant in cultivation. With me it has been one complete mass of bloom all through the season, and will undoubtedly continue so till the frost cuts the young flowers off and prevents them opening. *Lutea* should have the same preparation made for it as that recommended for *Mauve Queen*. In a future communication I will state in what arrangements *lutea* and *cornuta* will look well, and note some other fine plants I have seen at the Liverpool Botanic Garden and elsewhere.—J. WILLS.]

STRINGER & CO'S REGENERATOR.

I AND many more of the readers of THE JOURNAL OF HORTICULTURE would be glad to know what the experience of those is who have tried this article, which is advertised in your columns as producing the most extraordinary effect on fruit trees—an effect which I for one do not believe in. What is the meaning of, "The Regenerator is introduced into the sap at the fall of the leaf?"—QVIS.

[We have had a communication on the subject which we declined to publish. Whatever the Regenerator and its effect may be, the statement which you have quoted from the advertisement is simply nonsense. All communications on this subject must be well authenticated, otherwise they will not be inserted.—EDS. J. or H.]

CORNWALL MYSTIC BARS.

YOUR paper has of late contained some allusions to these bars, as forming a superior kind of stile. Allow me who live in their midst, to point out that they are not a contrivance

replete with advantage. Certain it is, that departed crinoline suffered more with the usual steeple-chase type; but I can assure you that the nocturnal pedestrian not having the advantage of any gas illumination in crossing these bars fixed at different distances, bridging a gulf differing in depth from 1 to 5 feet, according to the exigencies of drainage, &c., has every facility offered him for experiencing the sensation of passing down a shaft with an abrupt termination, accompanied by an ample removal of cuticle as the minimum damage.

I have known such instances happen with ladies during the daylight, and I need hardly say that they would prefer crinoline contention to any extent, rather than be subject to such a *four pas*.—*CORNUBIENSIS*.

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 17TH.

SHOW OF VARIEGATED AND OTHER PELARGONIUMS.—There was on this occasion a most extensive and excellent display of the newest and best of the Variegated and Gold and Bronze Zonal Pelargoniums, many of the exhibitions being so nearly balanced in merit that the task of decision was difficult even to judges of such experience as those appointed.

In Class 1, which was for the best six Variegated Zonal Pelargoniums not yet in commerce, Messrs. F. & A. Smith, of Dulwich, were first with Sunray, King of Tricolors, Corsicans, Earl of Derby, Peri, and Banshee; the last two, white-edged, also receiving first-class certificates. Messrs. Saltmarsh, of Chelmsford, were second with Mrs. Pattison, Alma Browning, Sunrise, Vesuvius, Duke of Baccleuch, and Crown Jewel; Messrs. Carter & Co. being third with Mrs. Dunnett, Sultana Valide, Marian, Aurora, Royal Standard, and Sultan Abdul Aziz. Mr. Wills, Huntroyde Park, Messrs. E. G. Henderson, and Messrs. Guraway & Co., of Bristol, also exhibited in this class.

In Class 2, for the best six Gold and Bronze Zonal Pelargoniums not yet in commerce, Mr. Wills was first with Diadem, Her Majesty, The Sultan, Arthur H. Wills, which also received a first-class certificate, Admiration, and Princess Beatrice. The second-prize collection was unfortunately missed.

In Class 3, for the best three Variegated Zonal Pelargoniums, Messrs. F. & A. Smith were first with Jetty Lacy, Sylph, and Sunray. Messrs. Carter & Co. were second with Mrs. Dunnett, which also received a first-class certificate, Viceroy of Egypt, and Emperor; and Messrs. E. G. Henderson third with Lady Sheffield and Howarth Ashton, both of which had previously been awarded first-class certificates, and Mrs. Grieve. Mr. Bull, Messrs. Saltmarsh, Mr. Tirebuck, of Luton, and Mr. Aldred, of Kilburn, likewise exhibited.

For the best three Gold and Bronze varieties, shown in Class 4, the first prize went to Messrs. Downie, Laird, & Laing, for Kentish Hero, Mrs. John Todd, and Countess of Kellie, all three of which were very fine; the second to Messrs. F. & A. Smith for Sybil, Combatant, and Brilliant; and the third to Mr. Wills for Her Majesty with fine bold foliage, Beauty of Sabden, and Illuminator.

The next Class, 5, was for the best Golden Variegated Zonal, and here the first position was taken by Countess of Craven, shown by Messrs. Perkins, of Coventry, who also received for it a first-class certificate. It has medium-sized or rather large leaves, with a fine golden edge, and a red and malberry zone. Messrs. F. & A. Smith were second with Jetty Lacy, a handsome variety; and Mr. Watson third with Mrs. Dix, which has been frequently noticed in these pages. Messrs. Saltmarsh had a first-class certificate for Crown Jewel; and similar awards were made to Messrs. E. G. Henderson for Beauty of Culford, having a broad zone with an unusual amount of red in it, and to Messrs. F. & A. Smith for Retaliator. Mr. Turner, of Slough, and Mr. Aldred also competed.

In Class 6, for the best Gold and Bronze Zonal variety, Messrs. Carter & Co. were first with Egyptian Queen, to which a first-class certificate was awarded. It has a very broad reddish bronze zone with a golden centre and edge, and is altogether very beautiful. The same firm were third with Cleopatra, somewhat similar in general appearance. The second prize went to Messrs. Downie, Laird, & Laing for Countess of Kellie, with a handsome light-coloured zone and a bright golden ground. Mrs. Frampton, from Mr. Uphill, Moreton, Dorchester, received a first-class certificate in this class, its colours being good and clear.

Class 7 was for the best Golden Self; and here Mr. Tirebuck, of Luton, was first with Golden Drop, Messrs. Saltmarsh, of Chelmsford, being second with Golden Queen, and Mr. Tirebuck third with a variety under the same name, but with larger leaves. Mr. Turner, Mr. Wills, Mr. Ball, and Messrs. F. & A. Smith also exhibited.

In Class 8, for two plants of the best Variegated Zonal Pelargonium in commerce, Perkins were first with Queen Victoria, and Messrs. F. & A. Smith second with Defiance, to both of which first-class certificates were also awarded; Mr. Watson being third with Miss Watson. Messrs. E. G. Henderson, Ball, and Carter were also exhibitors in this class.

Class 9 was for the two best Golden Variegated Zonal varieties, whether in commerce or not. The first prize was awarded to Messrs.

F. & A. Smith for Defiance and Jetty Lacy, the second to Mr. Watson for Mrs. Dix and Miss Watson. Messrs. Carter & Co., Mr. Wills, Messrs. Saltmarsh, and Messrs. E. G. Henderson had also fine varieties.

Class 10 was for the best six Gold and Bronze Zonal varieties put in commerce within the last twelve months. Mr. Wills took the first prize with Beauty of Ribblesdale, Perilla, Firebrand, Beauty of Calderdale, Model, and Compactum. Mr. Bull was second with the five last named and Glowworm.

The first prize in Class 11, for the best Silver Variegated Zonal Pelargonium, not in commerce, was awarded to Messrs. F. & A. Smith for Miss Burdett Coutts, with a large bold leaf with a broad edge and zone, the latter with much red in it. Messrs. E. G. Henderson were second with Italian Sunshine, with smaller leaves exhibiting less red; and Messrs. F. & A. Smith third with Peri, having a conspicuous white edge, and a broad green centre.

FLORAL COMMITTEE.—This was one of the most interesting meetings that have been held this year, and much is it to be regretted that comparatively few of the Fellows could enjoy it. The competition among the raisers of Variegated and other Zonal Pelargoniums was most spirited, and hard indeed must have been the task of the censors to have made their decisions. There were many other plants sent, and so numerous, that we fear all cannot be noticed.

Among the exhibitors of seedling Dahlias Mr. Thorneycroft exhibited four—namely, Conqueror, Scarlet King, Mrs. Cooper, and Princess Mary of Cambridge; the last, a delicate creamy white, received a second-class certificate. Mr. Wheeler, Westminster, sent five seedling Dahlias. Chameleon, buff tipped with lilac, and Rosy Circle, were awarded second-class certificates. Mr. Burgess, Chelsea, sent two seedling Dahlias, named Mrs. Burgess and William Lund; Mr. Hopkins, Brentford, seedling Dahlia Gipsy Queen, white ground shaded with deep rosy earmine, and which received a second-class certificate; and Mr. Elliott, Birmingham, seedling Pompon Dahlia Honeycomb. Mr. Eckford had Dahlias Eliza and Hon. Mrs. Bonverie; also five seedling Verbenas, no advance on those already sent out. From Mr. Rawlings, Romford, came four Dahlias—Hebe, White Bedder, Little Bobby, a Pompon, and Golden King, which was awarded a second-class certificate; and from Mr. Church, Woolwich, two Dahlias—Reform, a deep purple, and Memorandum, a shaded lilac: the latter received a first-class certificate. Mr. Legge, Edmonton, sent Dahlias Beacon, Fairy Queen, Sultan, Flora, Rainbow, and President, a dark crimson, fine flower—first-class certificate. Mr. Turner, Slough, exhibited Dahlias Rosamond, dark rose—first-class certificate; Adonis, blush white—second-class certificate; Vidette, rosy purple—second-class certificate; Buttercup, deep yellow—first-class certificate; Billy Botton, a fancy of nondescript colour, excellent form—second-class certificate; and four others. Mr. B. W. Knight, Battle, sent out specimens of a very fine bedding scarlet Verbena called Constance—a first-class certificate was awarded; and from Mr. H. Walton came a seedling Calceolaria with large deep red flowers, but the plant was out of condition.

Mr. Ball sent a magnificent collection of plants, occupying one whole side of the Council-room, many of which had received certificates. The following were awarded certificates on this occasion:—*Oreodoxa regia*, an elegant Palm, first-class; *Astrocaryum niveum*, first-class; *Cyathea caudiculata*, first-class; *Aracaria elegans*, first-class; a special certificate was awarded the collection. Messrs. Veitch & Sons exhibited some very beautiful plants. *Aloesia Jenningsii*, with beautifully marked foliage, received a first-class certificate. Most of the plants in this collection, which was awarded a special certificate, had previously received certificates, such as *Cattleya exoniensis*, *Pavium variegatum*, *Selaginella Poulteri*, and *Davallia parvula*. A fine-foliated *Cinchonaceous* plant, stated to be suitable for subtropical gardens, was much admired, and the Committee requested that it should be sent again. Messrs. E. G. Henderson also sent several good plants merely for exhibition. Among them were *Miltonia Clowesi*, *Cyanoche chlorochilum*, *Cattleya speciosissima*, a very fine kind, and others.

Mr. Shortt, Heckfield Place, received a first-class certificate for *Saxifraga longifolia* (vera), an old plant, but scarce. A special certificate was given for his collection, containing two Cape Pelargoniums, *Sarcocottis lineata* and *S. variegata*, *Hibiscus metallicus*, *Satyrion aureum*, &c. Mr. Earley, Digswell, sent some well-grown specimens of *Echeura fulgens*, suitable for table decoration, for which purpose they will prove very effective. Mr. Cannell, Woolwich, sent a seedling Ivy-leaf Pelargonium, Duke of Edinburgh; the plants were rough and out of condition; when better grown it will be likely to be a very useful plant. From Mr. George, Stamford Hill, came *Tropaeolum Scarlet Perfection*, but which must be seen bedded out before it can be noticed. Messrs. Downie, Laird, & Laing sent *Wignandia Vigieri*, a fine-foliated plant, not equal to the other species. From Mr. Salter, Hammersmith, came a small collection of plants, among them *Beta chilensis*, with very handsome dark foliage with orange and scarlet markings on the midrib of the leaves; *Centaurea magnifica*, not equal to *erandissima*; *Crassula Cooperi* and *Pachyphylon bracteosum*. Mr. Beach, gardener to C. J. Herries, Esq., Sevenoaks, sent *Fuchsia gracilis aurea* and *Hoya carnosus* var. *alba*; Mr. Richardson, Southend, Darlington, *Athyrium Filix-femina* *Pesseanum*, to which a first-class certificate was awarded; and Sir W. W. Wynne, Bart., a

small plant of *Bougainvillea glabra*. Mr. W. Paul exhibited *Cupressa Lawsoniana ochroleuca*, which received a first-class certificate, a variety of *Taxus*, and a collection of beautiful *Roses*, which were awarded a special certificate. Mr. Jackson, Woking, sent a basket of small plants in pots, full of flowers, of his *Clematises*. A special certificate was awarded for them.

The following Variegated Zonal Pelargoniums were selected for certificates from the plants exhibited in the various classes:—Messrs. F. & A. Smith, Dulwich, received first-class certificates for Miss Bardett Contts, a fine white-edged kind; Defiance, with a dark fery zone; Queen Victoria, a white-ground variety; Peri, white ground, with a bright rosy zone. Messrs. Carter first-class for Egyptian Queen of the Gold and Bronze section; and Mrs. Dunnett, deep-coloured zone. Messrs. Perkins first-class for Queen Victoria and Countess of Craven. Mr. Turner, Slough, first-class for Mrs. G. Hanbury. Messrs. E. G. Henderson first-class for Beauty of Culford. Mr. D. Uphill first-class for Mrs. Frampton. Mr. Wills first-class for Bronze Zonal Arthur J. Wills.

Messrs. Downie sent a white-variegated Pelargonium called Cloth of Silver; Mr. W. Paul Prince Silver Wings and Snowdrop. Two very pretty seedling Variegated Pelargoniums were brought by Corporal Browne, of the Royal Engineers, who had raised these seedlings in his small sitting-room, after carefully fertilising the flowers. They were named Royal Engineer and Hon. Mrs. W. le Poer Trench. It is always gratifying to see this rational and amusing occupation so enthusiastically carried out by those who have far heavier duties to perform day after day. It will be well if the Corporal's example should be followed by others.

FRUIT COMMITTEE.—At this meeting prizes were offered in separate classes for the best dishes of Peaches, Nectarines, and Apricots from the open wall, and there was a class for each of the same fruits from orchard-houses; there were likewise classes for the best three dishes of Plums, and for the best dish of Figs. No Apricots were shown either from walls or orchard-houses. The first prize for the best dish of Peaches from the open wall was taken by Mr. Ruffett, gardener to Viscountess Palmerston, Brockett Hall, with finely ripened fruit of *Violette Hâtive*; the second prize going to Mr. Earley, gardener to F. Pryor, Esq., Digswell, for Barrington. Mr. Whiting, Mr. Lyon, Hedsor, and others also exhibited good fruit though not so fine. In the corresponding class for Nectarines, Mr. Ruffett was again first with *Elrège*; and Mr. Whiting, The Deepdene, Dorking, second, with *Pitmaston Orange*, both well ripened and of fine flavour, but not remarkable for size. Mr. Beach and Mr. Hughes, gardener to the Rev. G. Kemp, likewise exhibited. For orchard-house Peaches, a second prize was awarded to Mr. Whiting, The Deepdene, for *Noblesse*; and Mr. Douglas, gardener to F. Whitbourne, Esq., Loxford Hall, Ilford, sent *Walhurst Admirable*; while from Mr. Tillery, gardener to the Duke of Portland, Welbeck, came large fruit of the Barrington, but not apparently perfectly ripe. Mr. Tillery also sent good examples of *Elrège* Nectarines, from an orchard-house. In the class for Plums, three dishes, the only exhibition came from Mr. Whiting, who had a second prize for *Impératrice*, *Reine Claude de Bavi*, and *Guthrie's Late Green*. Mr. Hughes, gardener to the Rev. G. Kemp, had a similar award for a dish of *Brown Turkey Figs*, small but well ripened.

Mr. Ingram, Royal Gardens, Frogmore, received a first-class certificate for a seedling Plum called *Bonne Boche*, which proved of delicious flavour. From the Society's garden at Chiswick came large examples of *Goliath*; and *White Magnum Bonum* came from J. Whitmore, Esq., Sloane Street. Mr. Webb, Calcut, Reading, sent a seedling Plum and Apple, but they were not considered equal in merit to existing kinds. Mr. Broach, Sorbiton, exhibited a large fine-looking seedling Pear called *Lord Suffield*; but it, too, was not considered of sufficient merit for an award. Messrs. Lee, Hammersmith, sent fruit of *Royal Vineyard Peach*, a fine-looking variety, of which it was stated that the parent tree bore a heavy crop as a standard out of doors in 1865, the fruit averaging 10 ozs. each, but that the May frosts had destroyed all the blossoms of the parent tree for the last two years. It is described as being of vigorous habit, and ripening its fruit, which is juicy and of good flavour, a week earlier than the Barrington. Mr. Short, Heckfield, sent a variety of *Pink Apple* introduced from Brazil, stated to keep good for from five to seven weeks after being cut from the plant, but it was not ripe enough for a satisfactory conclusion as to its merits being arrived at. A seedling white Grape with large berries was also shown by Mr. James, gardener to the Earl of Dartmouth, Patchell, but no award was made for it. Mr. Jones, gardener to Lord Leonchill, Petworth, sent a seedling Plum; Mr. Ford, a seedling Black Currant; and Mr. Perkins, gardener to Lord Henniker, Thornham Hall, a scarlet-fleshed Melon; but these, also, were not considered to merit any award.

G. F. Wilson, Esq., Weybridge, was awarded a special certificate for *Loise Bonne* of Jersey Pears of remarkably fine flavour, grown in pots in an orchard-house, and then plunged outside. Mr. Wilson also exhibited fine fruit of the Melon Apple. A special certificate was also given to Mr. Chalmers, gardener to E. J. Colman, Esq., Stoke Park, Slough, for four heavy finely grown *Queen Pines*. Messrs. Veitch exhibited their *Muscot Champion Grape*, a remarkably fine variety, with a *Frontignan* flavour. It was raised from Mill Hill Hamburgh and Canon Hall Muscat, and succeeds in the same temperature as a *Black Hamburgh*. In the specimen exhibited the *Frontignan* flavour was strongly marked, and the flesh besides was very rich and juicy.

The Committee confirmed their previous decision as to its high merit.

Among other subjects shown were fruit of *Monstera deliciosa*, from Mr. Fleming, Cliveden; *Quetsche* or German Prune Plums, from Mr. Turner, of Slough; *Morello Cherries*, from Mr. Tillery; good specimens of *Yellow Ingestrie Apple*, also *Raspberries*, and *Red Grape Currants*, from Mr. Beach, gardener to C. J. Herries, Esq.; and a collection of upwards of eighty Apples and Pears, from Mr. W. Paul.

SEEDLING FLOWERS AT THE CRYSTAL PALACE SHOW.

THE following are those which received certificates:—

Gladioluses, from Messrs. Kelway & Son, Langport. First-class certificate for Charles Turner, Refulgens, Snowflake, and Mr. Robinson.

Hollyhocks, from Mr. Michin, Hook Norton, Oxon. First-class certificate for Rev. C. Garnett and Alysens.

Verbenas, from Mr. C. J. Perry, Castle Bromwich. First-class certificate for Miss Turner, Interesting, G. P. Tye, Hercules, and J. C. Ward.

Verbena, from Mr. Knight, 67, High Street, Battle. First-class certificate for Constance.

Dahlias, from J. Keynes, Salisbury. First-class certificate for Mrs. Doids, Leopardess, Rosy Queen, and Yellow Boy. Second-class certificate for Chameleon. From Mr. C. Turner, Slough. First-class certificate for Mrs. Dorling, Adonis, High Sheriff, Bottercap, and Master Johnny.

Dahlia, from Mr. Rawlings. First-class certificate for Hebe.

POLYSTICHUM LONCHITIS.

CAN *Polystichum lonchitis* be called a proliferous plant?

Professor Henslow gives as the definition of proliferous that it is "an unusual development of supernumerary parts."

I have an old plant of *P. lonchitis* that yearly produces such a large family of little plants clustering round its roots, as, I think, might fairly entitle it to rank as proliferous.

On the 12th inst. I divided sixteen healthy plants from the parent root; and, had I not feared to injure an old friend, I think I might have taken as many more.

The original plant came into my possession from a nurseryman at Nuneaton, in Warwickshire, to whom its history was not known. It then only possessed a few fronds: whereas now the old plant grows in a beautiful vase-like form, healthy fronds clustering all round the nest of brown embryo fronds in the centre; while the outside of the plant, till yesterday, presented a little forest of young fresh-looking fronds, growing in tiny vase-like form round numberless small crowns.

The plant is quite a fortune to me, for *P. lonchitis* is a general favourite, and not always to be procured genuine.—
FELIX PERMINA.

OIL AS A DESTROYER OF INSECTS.

WITHOUT having had occasion to try the receipt of your correspondent, "C. I. M.," for the destruction of the Pear scale, I have used it for other pests of the garden with perfect success. More than thirty years ago I applied it to some Apple trees infested with American blight, and subsequently I have on several occasions employed it for the white scale on plants; but in the latter case no acrid oil ought to be used, but a camel-hair pencil dipped in sweet oil, the affected part of the foliage being touched with it, so as fairly to close the insect inside. The portion oiled was fatal to the insect, without, in any instance that has come to my knowledge, the oil being hurtful to the plants, certainly not so much so as removing the insect by ordinary washing.

Some time ago a *Kennedya* occupying a prominent position as a climber in the conservatory, became affected with this insidious pest, and in spite of repeated rubbings off, it spread, and soon occupied a great part of the plant, to attempt to clean which would have been an endless affair. I, therefore, cut the plant down, leaving only 8 or 10 feet of the strongest shoot to furnish the space allotted to it. This I had oiled all over, there being no leaves at the time, and, as your correspondent justly observes, it shone like polished mahogany, and by-and-by it broke into fresh shoots, which have hitherto remained clean. The liability, however, of this class of plants to the scale renders its being kept at bay a matter of no small difficulty when plants that may have some slight acquaintance with this pest are frequently brought in or taken out of a

house. I have, however, found sweet oil the most efficacious of all applications, and that which inflicts the least injury on the plants, either as regards appearance or health. Applied to plants affected with mealy bug it is equally efficacious, and a small phial hung up in a plant-stove, with the handle of the pencil run through the cork, so as always to be in readiness when an enemy is seen, is a very good appendage to such a structure; for although few like to acknowledge having either of the two insects alluded to, there are comparatively few places perfectly free from them, and an easy way of keeping them down is an important affair. I have, therefore, every confidence in confirming what "C. I. M." says of oil being fatal to the Pear scale, and I expect any cheap oil not possessing any acidity or irritating ingredient, will do for out-door trees in winter. In the case in which I used oil for American blight, common train oil was applied; I think linseed oil has been used for the same purpose, and I once saw some ugly scars on an Apple tree smeared over with a very common grease with advantage to the tree, and death and destruction to its enemies.—J. ROBSON.

THE REV. H. COTTINGHAM'S GRAPES AT THE HEATH.

For the information of your readers let me state that this residence is about five miles from Chesterfield and seven from Mansfield, and lies on the chief highway between these two towns. It is a neighbourhood fraught with general interest, and charms adapted to the tastes of ramblers abound on every hand. From Mr. Cottingham's flower garden and drawing-room windows are obtained charming views of Hardwick Hall, on the brow of a bold and commanding hill. We cannot turn our attention to Hardwick Hall without a train of historical circumstances rushing on the memory. It was here that Mary Queen of Scots was for some time confined—not in the present mansion, but in an old dilapidated edifice close by, the massive grey walls of which are overgrown with Ivy and have fallen into a state of decay. In the picture-gallery of the present mansion is to be seen a fine portrait of the celebrated Thomas Hobbes, the author of the "Leviathan." Hobbes chiefly resided with the Duke of Devonshire at Chatsworth. He died at Hardwick (whither he had just removed with the family), at the venerable age of ninety-two. His remains were interred in the adjacent church of Ault Hucknall, where there is a monument raised to his memory. The house is very large, and in the quaintest form of the Elizabethan style of architecture. One extraordinary feature appears to be the number and size of the windows, which are set so thickly together, and so elevated, as to have often suggested the comparison of the house to a huge lantern. Hence it is not unfrequently termed in a popular local rhyme—

"Proud Hardwick Hall,
More windows than wall."

The park is richly wooded, very extensive, and embellished with a profusion of venerable Oaks. Altogether the park, with its attractions, the antiquity of the old dilapidated mansion, the present one with its assemblage of curiosities, and the surrounding scenery so pleasant, enable one to spend a day in the neighbourhood with advantage as well as pleasure.

The chief feature at Mr. Cottingham's is the superexcellent Grapes, and I had many times heard of the remarkable success attending their culture; so availing myself of a special invitation a few days ago, I can now report on the Grapes and acknowledge the extreme kindness of Mr. Cottingham.

There are but two houses of Vines, both together being 60 feet in length, with a glass partition in the centre about 13 feet wide and 10 feet high. One house and part of the other was planted in 1863; the other part was added and planted in 1865. The varieties grown are Black Alicante, Barbarossa, White Tokay, Black Hamburgh, Muscat of Alexandria, Canon Hall Muscat, and the Black and White Frontignan. The two last-named Mr. Cottingham intends to remove and replace with varieties of greater value. The border for the Vines planted in 1863 is on the outside, and those planted in 1865 have a border both inside and out. There is nothing particular in the formation of the borders more than is met with in all ordinary gardens. This affords another very convincing proof that it is not requisite to make expensive and complicated borders in order to produce the finest Grapes. The compost used is good turf, with a small proportion of lime rubbish and broken bones. Had Mr. Cottingham had oyster-

shells at command he would most probably have used them in the compost. Care is taken to secure perfect drainage, and the outside border is never allowed to become very wet.

Before giving the results I will state that Mr. Cottingham is the rector of The Heath, and keeps no regular or skilled gardener; that the entire management of the Vines rests with himself and his curate, the Rev. T. B. Vaughan; and during their absence air is given and taken off by one of the servants in the house.

In the year 1865 the largest bunch cut was Barbarossa, and weighed 10 lbs.; Muscat of Alexandria, 8 lbs.; Black Alicante, 6 lbs. Last year the largest bunches of Barbarossa were but a little over 8 lbs. This year, when ripe, the best bunches of Barbarossa will be from 8 to 9 lbs.; the bunches of Black Alicante will average about 5 lbs.; and the Muscat of Alexandria, of which I counted seven bunches on a Vine, will average about 4 or 4½ lbs. each. All the bunches on the latter were as nearly equal in size as possible. These are from the Vines planted in 1863, and those planted two years later are doing equally well, and carrying fine bunches of Grapes. The berries of Canon Hall Muscat were of extraordinary dimensions, though I did not think the bunches were so large in proportion as those of the other varieties. The bunches were what Mr. Thomson, of Dalkeith Park, would pronounce perfect in colour, size of berry, size and symmetry of bunch, beautiful bloom, and I do not hesitate to make the assertion, they would be perfect in flavour. The foliage was in the highest state of health, and perfectly free from all the ills which Vines are subject to. There evidently must have been a great amount of care and persevering skill exercised to bring the Vines to their present state of perfection; and I place this instance of success on record to stimulate those who have hitherto failed, and as an encouragement to those amateurs who would like to grow a few Grapes but dare not embark on their cultivation.

The kitchen garden was a model of perfect arrangement and good order. In proximity to the rectory is a neat flower garden, and adjoining this the lawn and pleasure grounds. In a secluded walk is a small hardy fernery planted with very choice hardy varieties of Ferns. I may add that I have many times visited places of much larger extent, but never any which afforded me more real gratification and pleasure; and though there are no attempts at show or display, yet great and important results are accomplished.—QUINTIN READ, *Gardener to Wm. Hollins, Esq.*

RICHMOND COMPANY'S TOBACCO WASH AND HOPS.

I AM requested to correct an error into which the worthy writer on so many topics, "D., Deal," has fallen, in reporting the advantages derived from the use of tobacco wash in arresting the ravages of the fly on the Hops, seen by him at Mr. Bannerman's, of Hunton. The error is simply that of giving the credit to Pooley's ground tobacco, which should have been accorded to the Richmond Cavendish Company (Limited), of which Mr. Thomas Cope is Manager. It appears that the wash was formed from the Company's material and soft soap boiled together and strained; and it was applied to the Hops with all the benefit mentioned by "D., Deal." The mistake in the name, of course, was purely accidental.—J. ROBSON.

NOTES ON THE CAPE HEATHS.

THE graceful elegance of the Cape Heaths claims expressions of the highest praise. Many other plants obtain for themselves world-wide approbation from their magnificence and the bold dash of their rich colours, but the Heaths possess a sweetness which is entirely their own. They are beautiful alike in their greenness, and while loaded with their many charming umbellated or tapering trusses of waxlike bells, whose glowing shades partake of almost every colour, while their endless diversities of foliage, habit, and form of flower constitute them one of the finest divisions of greenhouse evergreens. Perhaps no other species of plants are more prized among gardeners than Heaths, yet comparatively few can point to their collections with such feelings of pride as they can cherish toward other plants under their care. This may arise from many causes—want of accommodation, time to give them attention, &c.; but the chief cause, I fear, springs from other sources—the application of wrong soil, and of water loaded with mineral

substances, which are sure to kill them by degrees. Free, turfy, sandy peat, and abundance of pure rain water above everything, are essential to the production of healthy results.

In illustration of these remarks, I shall narrate one instance that occurred in my own experience; though the reverse of creditable to myself, it has taught me something to avoid afterwards. A few years ago, while replenishing our stock of hard-wooded plants to furnish our new conservatory, some two dozen *Heaths* of sorts formed part of our purchases, which were extraordinarily healthy in appearance; but on making examination of their roots we found a shift of pots was required. This was a difficulty, seeing our sample of peat was most indifferent, resembling more in character sooty mortar than the desirable material. We had no remedy for it but to be off to the moors. I took a man with me who professed to know where to find exactly what we required, but after traversing the moor over bog and heath for hours, the wished-for material could not be obtained; and we were therefore obliged to content ourselves with the nearest approach to it. The necessary amount of the most likely peat we had chopped up to a proper consistency, adding a large quantity of silver sand. The plants were then carefully potted and housed in a deep cold frame at the north side of a high wall which divided the garden. For a time they looked all the better of the shift, but at length a few began to show symptoms not at all desirable; a faint brown began to spread itself among the green of the leaves, and all appearance of growth had stopped. We immediately had the plants turned out for inspection, and to our surprise found the roots had never entered the new soil, which we found firmly adhering to the pots, and having assumed the exact appearance of the sooty mixture we had at home. On continuing our examination, we were grieved to find the roots had been receding instead of advancing. The intricate mass of hair-like roots that encircled and protruded through the balls now stuck to the sides like rotten network, making it evident that the plants had been poisoned.

So much for our home-manufactured peat-compost; but I must not neglect to mention the other agent of death to the *Heath* which we had been dealing with. Our supply of water was conducted to the garden in pipes from a well at some distance. This water I afterwards found to be highly impregnated with lime, enough of itself to have done detriment.

As a last resource, I communicated with our nurserymen, and requested that they might forward a hundredweight or two of the peat used in their establishment, which was done, and from that date began our better fortune. The beneficial effects that followed the application of the good soil I shall now endeavour to describe. We first had the plants taken out of their pots and their roots disengaged from the obnoxious soil, then dressed away the dead fibres with a sharp knife; this reduced their balls one-third of their original size. We next potted them into the same size of pots, using a mixture of one-fourth silver sand in addition to that the peat already contained. The peat was well chopped up but not sifted, and the rougher parts used as a covering for the drainage, which was pieces of the silver sand instead of broken pots. We then transferred the plants to their new pots, pressed the soil firm to their balls while potting, and completed the operation by administering a thorough watering. The plants were allowed to dry their foliage before replacing in the frame, by standing in a shaded part of the potting-shed. The frame was supplied with a covering inside of coal ashes to a depth of 3 inches, well beaten down, that the pots might stand clean and dry, and worms be prevented getting into them from below.

After returning the plants, the frame was kept shaded, and little air admitted for the first eight days; but after this, ventilation was gradually given more abundantly, and the shading dispensed with excepting on occasions of bright sunshine acting on the plants. After a few weeks the plants began to show a deeper green, and give signs of starting growth through their half-withered points. Throughout this time few root-waterings were demanded. Syringings of pure rain water were given daily when the atmosphere was comparatively hot, but on dull cold days water was withheld, excepting to those requiring it at the root.

This state of things lasted a little longer, until the plants had acquired more vigorous growth, when they entirely got over their former sickness, and only left a few with naked stems to tell of their calamity. To remove this eyesore, all the leaders were carefully pegged down across the pots, and had the points pricked out of them.

Air was admitted copiously day and night after this stage,

especially when the atmosphere was soft and balmy, when the lights were removed.

Shading was only desirable in the afternoons, to protect the young growths from those piercing blinks of sunshine that sometimes burst out upon us in cloudy weather and on very hot days. With this treatment the plants made wonderful strides, and by the time for placing them in their winter-quarters, were bristling all over with healthy shoots. Their winter attention comprised potting those whose condition positively demanded more root-room, but those not needing this were left till spring; before housing, the pots were washed, all weeds removed, and the strongest shoots pinched back. They were then distributed along the front stages where partial shading was afforded by other plants, while at the same time they had the advantage of plenty of fresh air and other attentions given, such as turning to the light, sprinkling overhead, and sometimes a smart syringing when thought needful, and supplying at the roots enough to keep the soil moist.

At the commencement of March a shift of two sizes larger pots was given, and each leader-shoot provided with a light, dwarf, well-pointed stake. With these the plants were assisted into their natural form, whether pyramidal, convex, or flat. The tops of the leaders were all pinched back an inch below the summit of the stakes. With the same system of treatment as the previous summer, framing them behind the wall at the latter end of May, &c., these plants had attained to fair dimensions, and had formed a good foundation for fair specimens. Some were covered with bloom, and others ripening their wood in healthy vigorous condition by the time the autumn came round.

By way of supplement, a few sentences on the propagation of the *Cape Heath* may be of use to those whom these notes are intended to benefit.

Propagation by Cuttings.—From the middle of July to September will be found a suitable period to extend the stock. The hard-wooded sorts, which are more difficult to root, require a longer time in the nursery-bed, and ought to be put in at once. The softer-wooded varieties will do later in the season or spring. In selecting, the strongest and stiffest points ought to be preferred, cutting them from the plant with a little hardened wood at the base, and using a sharp knife for the purpose; then dress off about an inch of their lower leaves, and they are ready for insertion. For a compost use fibry peat and silver sand in equal parts, filling up the pot or pan one-half with crocks, and spreading a covering over them of the coarser parts of the soil; next cover with a second stratum from the main body, and complete the bed with a half-inch layer of silver sand. Slightly press and level the surface, and insert the cuttings about 1 inch apart with a small dibber; then water through a fine rose to a degree that will saturate at least the two upper divisions of the compost. Cover the cuttings with a bell-glass, and attend regularly to the removal of the moisture that will gather inside the glass. Spread a piece of paper over the glass under sunshine, and raise the side a little after warm days for an hour. Sprinkle lightly through a fine rose overhead when the surface appears dry; and as regards temperature and place to grow them, the shady side of a greenhouse near the glass, with heat ranging from 60° to 65°, will suit.

Propagation by Seeds.—This can be effected by sowing in the beginning of August, but with some danger to the young plants in winter from damp and other causes. The month of March ought to be preferred, when we have the summer before us, that the plants may accomplish all that is necessary to establish them in an independent condition (in a sense), to contend with the changes of winter even in the best house.

Half fill the pan with crocks, and lay a covering from the rougher portions of the peat; next sift through a fine riddle a mixture of equal parts fine silver sand and peat; fill up the pot to half an inch of the top, and smooth to a level surface after pressing a little together; scatter over the seeds, and sift a little soil over to cover them, and again lightly press and level the surface of the bed; complete the business by softly moistening the bed through a fine rose, taking care not to disturb the seed-bed. Cover with a bell-glass, and place, if possible, in a shaded place where a little heat can be regularly obtained; otherwise attend to them as recommended for cuttings until the plants make their appearance, when the edge of the glass ought to be raised and air and light gradually admitted. When the plants have made sufficient strength to handle, they ought to be planted separately into thumb-pots, with the same

sifted mixture applied to them, and returned back to their shady quarters until root-action commences, when they may be again exposed to light and air by degrees, taking great care not to allow them to get dry at the roots, else it may prove all

labour in vain. Ultimately, when the plants may be considered hardened enough, they may be placed by the side of their older brethren and receive the same attention.—A. KERR (in *Gardener*.)

WOOD-BORING CATERPILLAR.

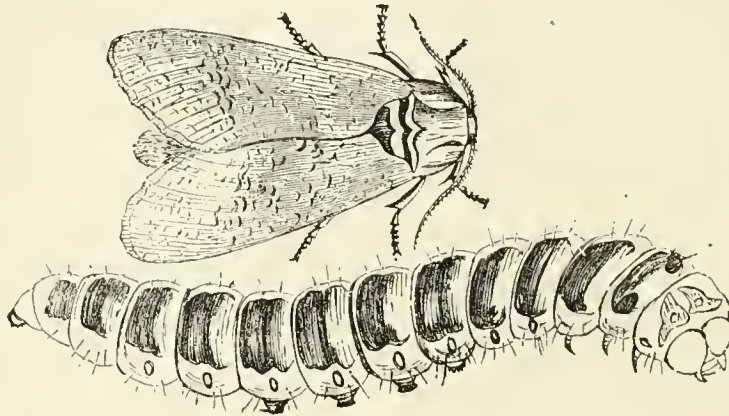
"A SUBSCRIBER" would be glad if the Editors could give any account of a monstrous caterpillar, which annually during this month eats its way out of the trunk of an Oak tree in the Isle of Wight, as if the eggs were inserted in the heart of the tree. Its length is from $2\frac{1}{2}$ to 3 inches, its colour black with orange spots, and orange all along the abdomen, and about the thickness of one's finger. Having had one put in a small box made of half-inch deal it ate its way nearly through it; but, as I suppose, from the want of nutriment in the dry deal it died, and has since been lost. I enclose some of the chips it made in the box. It is evidently causing the death of the tree out of which it burrows.

[We conclude that it is the caterpillar of the Goat Moth, *Cossus ligniperda*, of which we published the following some years since. A caterpillar of this *Cossus*, placed in a box, ate not only through the bottom of the box, but through the slab of the mahogany side-board on which the box was placed:—

"The caterpillar of the Goat Moth, both of which are represented in our drawing of the natural size, is most destructive to the wood of fruit trees, though the Elm, Oak, Willow, Poplar, and Walnut also, are liable to its attacks. It is the *Cossus ligniperda* of some naturalists, and the *Bombyx* and *Nyleutes* *cossus* of others. The caterpillar often measures full 4 inches in length, is smooth and shining, beset only here and there with single short hairs. It is dark red on the back, and the breathing-holes situated at both sides are of the same colour. The sides and lower part of the body are flesh-coloured; the head is black, the first segment also marked with black above. After remaining more than two years in the larva state, and casting its skin eight times, the caterpillar becomes of a light ochrish-yellow hue, shortly before becoming a chrysalis, which usually takes place in spring,

when it make a strong cocoons of chips of wood and small pieces of bark, which it has gnawed off. The chrysalis is yellow, and the segments are deeply indented and capable of much extension; its back is furnished with strong pointed spines, sometimes of a reddish brown colour. The cocoon is situated immediately within the opening in the tree, so that the pupa when arrived at maturity can press itself half out of the hole when the shell bursts, and the moth comes forth usually in the month of June or July, after having reposed in the pupa state for an indefinite time. When at rest the wings are folded together over the back in the form of a roof; it sits quietly in the day time on the stems of trees, and is difficult to be distinguished on account of its grey colour. Its wings measure, from one tip to the other, nearly 3 inches,

and many specimens more than this; the female is usually larger than the male. The fore wings are ashy white, clouded with brown, especially across the middle, and marked with very numerous streaks like net work; the hind wings are brown. Thorax ochrish in front, pale in the middle, with a black bar behind. The female is provided with a strong egg-depositor, with which she introduces her eggs into the bark of the tree—often one thousand in number; the young caterpillars living at first in



and between the outer and inner bark, and afterwards, when they are stronger, penetrating into the wood. When the existence of one of these creatures is detected in a trunk, by its excrement, relief comes too late for the tree, even if we are able to kill the caterpillar, the mischief being already done. Notwithstanding this, the caterpillar should never be left undisturbed, and an attempt should be made to reach it by enlarging the opening with a garden knife, or endeavouring to kill it by thrusting a piece of pointed wire up the hole. It is called the Goat Moth from the peculiar smell both of the insect and its larva."

NOTES AND GLEANINGS.

THE meeting of the Royal Association of Science in 1868 is fixed to be at Norwich, under the presidency of Dr. Hooker. This is a just tribute to him, and to that birth-place of botanists.

—THE Editor of the "Gardeners' Year Book" is now engaged in the preparation of next year's edition, and will be obliged by gardeners forwarding to him, at the office of this Journal, any additions or corrections as early as possible, to insure insertion.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Cabbages, the young plants in beds should be looked over, and the most forward transplanted or pricked out forthwith. *Celery*, continue to earth up. It is a good plan to sow fresh slaked quicklime through the beds or rows immediately previous to the first earthing-up. We have found by experience that the Celery-bed is the best slug trap in the garden, a double operation as it were is performed, and a vast amount of these

pests destroyed. The lime, however, must not be applied hot, and it must be shaken in carefully into the heart of the plant, not in coarse lumps. *Lettuces*, keep tying-up autumn. *Potatoes*, the taking up of the crop will require to be done with more than usual care. Separation must be made of the perfectly sound, the doubtful, and the bad. The former to be placed where they are to remain, secured from the access of frost and wet. Those that are doubtful had better be laid where they can be readily inspected. The effect of washing them with lime water should be tried. *Tomatoes*, expose the fruit to the sun.

FRUIT GARDEN.

Of all the operations necessary to promote fruitfulness, the general stopping of fruit trees is, perhaps, the most necessary, yet the most neglected. It does appear strange that so much should be said about modes of pruning (dignified by the title of systems), when the trees are stripped of their leaves, whilst even by some of these systematists they are shamefully neglected at the very period when the rivalry of contending shoots, and the darkness occasioned by watery breastwood, are so very prejudicial to the welfare of the true bearing shoots or spurs. Hence, in the spring, we hear so many complaints of the trees

blooming irregularly, "breaking blind," blossoms produced without pistils, &c. We recommend at this period the cultivator to go over all trained trees once more, and entirely to remove all late growths, except from the lower and inferior shoots. On Peach and Nectarine trees these may be kept growing as late as possible, in order to encourage strength in those parts, and to equalise the sap in the ensuing year, by the enlargement of their capacities for its reception. Pears will be found to benefit much by this mode of procedure; indeed, the whole of the snags left by shortening back the young spray in June should be totally removed in September. Much earlier than this would not answer, for, although it might not cause the true blossom-buds of next year to push, it would cause them to elongate, thereby producing abortive blossoms, and malformations in the fruit, of which we have had so many and extraordinary examples this spring and summer. Late-growing Vines should also undergo the same process, at the same time removing every lateral that is shading the principal leaves. This treatment should be applied to Vines in-doors as well as on the open walls.

FLOWER GARDEN.

Every attention should be paid at this season to collecting seeds of poplar flowers for mixed beds or masses of next year. The seeds of *Petunias*, *Salvia patens*, the various *Pentstemons*, *Calceolarias*, *Antirrhinums*, with a host of annuals, and other things, may be at this period collected. Gardeners, in general, can scarcely be expected to save many seeds, those who have small gardens may, however, do much in this way. Some of the climbers also produce seeds, such as *Tropeolums*, the *Maurandias*, the *Lophospermums*, &c. Let the planting of bulbs for early work proceed directly. Borders or beds deficient in the *Snowdrop*, the *Crocus*, or the *Narcissus*, should have some introduced. The main planting, however, may be reserved for the early part of November. A few of the earlier sorts of *Hyacinths* may also be planted, covering them 4 or 5 inches in depth, and surrounding the bulb with sand. Ten-week Stocks sown when recommended some time ago, should now be potted off, and placed in a shady situation for a few days, and then exposed until they are stored away for the winter. Cuttings of *China Roses* that are rooted should be planted out in the reserve garden, or potted off. Gather the cones of *Abies* and *Piceas* as they ripen, as a few hot days at this season open them, and the least wind shakes out the seed. Plants in beds that are overgrowing Box or other edgings should be cut back for cuttings, or taken to the rubbish-yard. Clip and fresh lay Box edging.

GREENHOUSE AND CONSERVATORY.

Greenhouse plants which are in the open ground should still remain as long as the weather continues favourable for maturing their growths. *Boragias* are much benefited by exposure a short time during autumn, and they require and deserve every attention. All the Chinese *Azaleas* should also be exposed for some weeks; they will be invigorated and improved by this treatment, but they should not be permitted to remain out late in the autumn, as the cold and wet are apt to make them cast their foliage. The *Francisneas* are very ornamental plants, and well adapted for those who have only one house. The *F. Hopesna*, although an old kind, is still very useful, and, moreover, very fragrant. The young rambling shoots should be constantly stopped, this will induce them to blossom freely, and keep the plants in a bushy state. Stout young *Mignonette* plants potted immediately and kept under cutting treatment for a week or so will flower nicely in November and December, when every little matter of the kind will be acceptable. The *Cyclamen hederifolium* is a nice little plant grown in pots for those having only limited room; indeed, the whole family of the *Cyclamens* is particularly ornamental, and easy of cultivation. The *Linum trigynum* is a pretty winter flower, one or two should grace every collection. As before observed, continue daily to house anything likely to suffer by the autumn frosts. The present weather is extremely tempting, and will, we have little doubt, prove a trap to many. Many of our summer favourites will now be on the eve of departure in the conservatory, if not already gone, and their place supplied with kinds peculiar to the autumn months. *Brugmansias* and *Clerodendrons* make an admirable display here at this period. Some large specimens should be grown late every season for this very purpose. They do admirably through the summer in any common vinery or Peach-house, provided they are duly supplied with water, and kept free from insects. Let all large *Orange trees*, *Camellias*, or other large specimens belonging to such structures be brought under cover betimes. Amongst

climbers, the *Stephanotis* and *Pergularia*, grown on ornamental trellises, show themselves peculiarly eligible to be introduced here on the decay of other flowers. The *Jasminums*, especially *J. Sambac*, are valuable plants thus treated. The principal treatment is stopping every luxuriant shoot as soon as it is a few joints long.

STOVE.

Several of the *Dendrobiums*, *Aërides*, *Saccolabiums*, *Vandas*, &c., will still make considerable growth by the application of a high temperature, with much moisture, taking care to increase the amount of sunlight. *Cattleyas* should not be encouraged to grow after this time, if good blooms are required. Young specimens, may, however, be kept growing still, for the sake of size. *Stanhopeas* which have made robust growth should have a diminished supply of water, as well as a decreased temperature and less shading; those still growing may be watered freely.

PITS AND FRAMES.

Take particular care during the present damp weather not to water cuttings too freely, unless they are very dry. Continue potting off the most forward struck cuttings, and fill the pots again with choice or scarce kinds.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

ALL our work has been to a considerable extent a repetition of that of the last and some previous weeks, and some time has been taken in *keeping weeds down*. A gentleman has asked us, "if we really do believe that people careless of weeds, can do so much injury to their neighbours as we have said they do," and we answer undoubtedly in the affirmative. Only the other day on a close-cut lawn we picked up in a square yard just twenty-seven winged Thistle seeds, a weed which is so difficult to eradicate when once it has taken possession of the ground. These downy seeds must have come from a considerable distance, and yet for some thirty yards the down looked on the lawn like a slight fall of snow. A breeze springing up, most of them were wafted away over the park, and into fields, where they would have a better chance of vegetating. As stated lately, we were remedying some defects in the gravel near the mansion, and could not help thinking how many of these Thistle seeds might have slighted among the fresh-stirred gravel before the surface had become too consolidated for them, which by this time it nearly is, and we know well how ugly a hole must be made to take a Thistle out of a solid gravel walk.

Some people do, indeed, contend that they have a right to do what they like with their own, and if they admire the rough "touch-me-not Thistle," on their lands and hedges, what is that to other people? This much, that the keenest admirer of Scott's emblem cannot, if he would, keep the Thistle to himself as his own. Like many other evils it will not be cribbed or confined to the place of its birth. It will exercise a baneful influence; and the man who stands on his right to grow, and bloom, and seed the Thistle, should be made to understand that he is not to be at liberty to fill his neighbours' fields with his favourite. It is high time that law should step in and compel that to be done, in waysides and hedgerows especially, which common sense and common prudence have yet failed to accomplish. We have heard it said, that a Scotchman in a fit of national enthusiasm took some heads of Thistles out to Australia, and the sowing of these is already threatening, by their vast increase, to be a curse to that island-continent. We have seen enough of downy Thistle heads in a single make-believe hedgerow to make sure of the preservation of the species for many miles round, plough, scarify, weed, and burn, as the farmers may.

Like most other things, the Thistle may be conquered in spite of its strong and deep roots, by frequent cutting; that in the end will kill the roots, and the cutting at least will prevent the seeding, which soon will increase the evil a thousand fold. The man who does what he likes with his own Thistles, and thus preserves them, should be treated much in the same way as the man who, asserting the same rights, keeps rabbits and pigs in his dwelling-house, and will have a pestiferous dung-hill close to his door in a thickly populated neighbourhood. Both are nuisances to be got rid of for the general good.

Weeds have grown as they never have grown before, and when we could not hoe, or keep the ground as clean as we would wish, we went or sent round and pulled or cut up all that were showing signs of seeding.

Celery.—Treated a part of our Celery as stated the other week, and have not yet cleaned and tied as much as we wish, as it is not pleasant working amongst it whilst it is in a wet state; and what with rains and heavy dews, it has been little dry until some afternoons of late. Our Celery is healthy enough, but we have seen some places, and heard of several others, where the Celery is very unhealthy this season, independently of good rich soil and suitable attention. This ailment is something very different from the fly, &c., which we are familiar with, and know tolerably well how to manage or keep away, and then the maggot will not come. The tops of the plants, the leaves, seem to assume a hard brown-like touch and tinge, and there it remains, and the plant remains too—that is, it just keeps alive, but it will not grow, do what the gardener will to charm it to do otherwise. Have any of our correspondents noticed this ailment, and can they state the cause or the cure? The instance that came under our immediate observation was at a place and under a management hitherto marked by fine luxuriant Celery, and there seemed to be nothing in position, soil, or circumstances to account for it.

Caterpillars.—These, like weeds, are becoming very numerous, but as yet we have suffered little in comparison with others we hear of, but still we have more than usual, owing to not having boys to hunt and beat down the white-winged butterflies. When we did so, we were little troubled with caterpillars on Cabbages and Cauliflower in the autumn months. We have heard of large breadths of young Cabbages on which not a leaf has been left, but all is cleared off as if an army of locusts had passed that way. Such caterpillars when not over-numerous may be picked off, and that is the surest method, but an impossible task when great breadths have to be gone over. The most rapid mode of getting rid of them is to dust the plants, and especially on the under side of the leaves, with quicklime, or even fresh wood ashes, but the lime is the best. When that is not advisable, strong clear lime water will cause them at once to fall, and will generally kill them. If unharmed, and very numerous, they will leave nothing green behind them, as they feed voraciously until they shut themselves up for their winter quarters. In some cases when the butterflies are very numerous in summer an unpleasant smoke, as burning rubbish, will deter them from visiting the place and depositing their numerous eggs.

Lettuces.—We have had no trouble with these until now, but slugs have begun on us in earnest, and they must feed at the darkest hours, as we can only know of their presence by the effects produced. We shall be under the necessity of sowing under glass, as our late sowings in the open air have every day been less visible than the day before, and that in spite of sprinklings of ashes, &c.

FRUIT GARDEN.

The chief work has been collecting fruit and looking after the enemies, mostly of the insect tribe. We may expect rats to leave us now for a time, as they will find better feeding in the stacks of the farmers. Our various contrivances had nearly driven them away, and not without cause were our efforts to start them. In one night they found their way into a pit and cut over, close to the surface of the soil, a score or two of favourite *Pelargoniums*, leaving the tops untouched on the ground, as if they did the whole out of mischief. We had to move the plants, or most likely in another morning not one plant would have been left ungnawed. It is a good plan to treat rats with barleymeal made into a rather stiff paste with water, and then when that is eaten to follow with another dose, but with arsenic mixed with it. Potatoes beaten up and fried with dripping and then mixed with arsenic are also very good; but two things in all such matters must be kept in mind: First, in making and putting down such mixture, the hand should never touch it; and, secondly, the mixture must be placed where no useful animal can have access to it.

Strawberries.—Those potted now require all the light they can receive, and never to suffer from want of water. Our main pieces and quarters in the open air are rather wild, as we have not yet been able to clear away the runners, which ought to have been done weeks ago, but it is rarely that one can have everything done at the right time. As a general rule, we let our Strawberry plants stand three years, and then the ground, when all is trenched down, is useful for Winter Greens and general crops. Many possessors of small gardens, however, have a sort of horror of making a fresh Strawberry plantation, and that chiefly for two causes. First, the dread of having but a small crop the first season. This can be surmounted by taking off the runners as early as possible, pricking

them out 4 inches apart in rich light soil, and then lifting them with good balls in autumn. Another easier plan is to take runners now, prick out in the same way so as to take little room, and take up and transplant next season. One advantage of this plan is, that all the plants that do not show bloom next season may be discarded, so as to make sure of fruitful plants. When the most is to be made of the ground, we would plant the first year in rows 1 foot apart, and 1 foot from plant to plant in the row, and in the second year we would remove every other row. The second objection is, that there is a shrinking from the trenching, dunging, and preparing of a fresh piece of ground for Strawberries, and they would rather put up with their old bed. Well, in this case we can only say, that in good loamy soils Strawberry plants will bear many years. We have had them good for eight and ten years, if every season after bearing the runners are removed, the plants themselves thinned by taking away the parts with the poorest buds, and then forking the ground an inch or two, but not more in depth, and dressing with rotten dung for the winter. Strawberries will flourish a long time under such treatment; but we lose the advantage of rotation of crops in a limited space.

ORNAMENTAL DEPARTMENT.

Gravel, lawn, flower-beds, cuttings, have taken up much of our time, and still there is plenty to do. Tender plants must now be looked after before the nights become too cold. Even on the present bedding system, much may be gained by mixing more and preventing the beds having too regular and monotonous an aspect as to height and level. We lately saw a flower garden which we have always admired; but the beds, well filled and well bloomed, were very large, and, standing on any side, you could see only a level breadth of colouring, the grass spaces though wide being too narrow for the huge beds. We could not help thinking, that half of the bed-space would have been more effective; and, again, what a relief massive, loftier stand-points in the beds would have been in breaking-in the monotonous level, and thus, even on the fashionable mode of planting, effecting a degree of light and shade. On the generally-received mode of planting no beds could have been done better.

In another place we were presented with a proof of what we have often alluded to, that it is better to have a small flower garden, and a small lawn well kept, than a larger one of either only very moderately attended to. Looked at in this light one acre may be more attractive than a dozen. Here is a neat lawn not altogether half an acre in extent, and yet such nice picture flower-beds, and the grass is like a Brussels carpet; and so it ought, for after the first mowings and rollings, it is run over by a Green's mowing machine at least twice every week, and sometimes oftener. There is another lawn and flower garden of at least three acres, the beds more numerous, exquisitely filled, but as you pass along you see there are weeds disputing with the flowers, there are as many decayed blooms in the beds as fresh ones, and to get near them until the after part of the day you must run the risk, from the length of the grass, of having your feet wet as high as your ankles. Will mere space, or quantity, or bulk, make up for the want of the first-rate keeping? For our own part, if the alternative is presented, we would sooner have the road than the acre, unless the acre could be kept as well as the road. Not a few are finding out what we long since laid down as a fact, that a well-kept lawn is the most expensive thing about a garden, and the expense will be increased in proportion to its size; and then at its best it merely repays the labour by pleasing the eye, and thus becomes as much a luxury as the keeping of fine paintings and pictures, with this difference, that the expense of the pictures is pretty well done with when they get hanging room after being purchased, whilst the expense of a lawn is pretty well a weekly outlay.

Window Gardening.—We read lately that the authorities of a town had issued their decrees that every person was to be fined so much after a certain day, who kept a flower plant in a pot outside his or her windows. There was no reason assigned, no circumstances stated under which the window plant might be retained as an ornament. We can fancy cases in which the careless watering of such plants, without means for catching the water, might be a nuisance to those passing beneath the window; but that could be easily obviated by having a watertight vessel for the plants to stand in. We can also fancy pots standing outside of a window liable to be blown down on the heads of passers-by, but that could be easily prevented by a couple of iron bars fixed to the walls, behind which pots and

boxes would be perfectly safe. We trust that authorities will not in general imitate such a prohibition. It is cheering to have plants inside of the windows of our living-rooms, but from June to the middle of October most of them will thrive better outside than inside, more especially if at first and last they are removed inside at night. We have no objection to such plants being properly secured, and that everything like a nuisance or an annoyance to others should be prevented; but that secured, we contend that encouragement and not discouragement should be given to the thus ornamenting the windows. The street, or the house, thus ornamented will always have a very different appearance from those left in their bare, unlowered grandeur. As the season advances additional care should be given to window plants to keep them clean and attractive, and many things, as Scarlet Pelargoniums, if out of doors, will need but little water, as the heavy dews, even without rain, will be almost enough for them.—R. F.

COVENT GARDEN MARKET.—SEPTEMBER 18.

The supply of wall fruit is beginning to fall off; but all other kinds of fruit are plentiful. Pears consist of Marie Louise, Summer Bon Chrétien, and Duchesse d'Angoulême.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples 1 sieve	1	0	1	6	Melons each	1	6	3	0
Apricots doz	0	0	0	0	Nectarines doz.	3	0	6	0
Cherries lb.	0	0	0	0	Oranges 100	8	0	14	0
Chestnuts bush.	0	0	0	0	Peaches doz.	4	0	8	0
Currants 1 sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black doz.	0	0	0	0	Pine Apples lb.	4	0	0	0
Figs doz.	2	0	3	0	Plums 1 sieve	2	6	5	0
Filberts lb.	1	0	0	0	Quinces doz.	0	0	0	0
Cobs lb.	0	0	0	0	Raspberries lb.	0	9	1	0
Gooseberries quart	0	0	0	0	Strawberries lb.	0	0	0	0
Grapes, Hothouse. lb.	1	6	4	0	Walnuts bush.	10	0	20	0
Lemons 100	8	0	12	0	do. per 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes each	0	3	0	6	Leeks bunch	0	3	0	0
Asparagus bundle	0	0	0	0	Lettuce per score	1	0	1	6
Beans, Kidney, 1/2 sieve	2	0	3	6	Mushrooms pottle	2	0	3	0
Scarlet Run. 1/2 sieve	2	0	3	0	Must. & Cress, punnet	0	2	0	0
Beet, Red doz.	2	0	3	0	Onions per doz. bush.	5	0	0	0
Broccoli bundle	0	6	1	6	Parsley per sieve	3	0	0	0
Bros. Sprouts 1/2 sieve	0	0	0	0	Parsnips doz.	0	9	1	0
Cabbage doz.	1	0	1	6	Pears per quart	0	0	0	0
Capsicums 100	2	0	3	0	Potatoes bushel	2	0	3	6
Carrots bunch	0	6	0	8	Kidney do.	3	0	4	0
Can. flower doz.	2	0	4	0	Radishes doz. bunches	0	9	1	0
Celery bundle	1	0	2	0	Rhubarb bundle	0	0	0	0
Cumbers each	0	4	0	8	Savoy doz.	0	0	0	0
pickling doz.	2	0	0	0	Sea-kale basket	0	0	0	0
Endive doz.	1	0	0	0	Shallots lb.	0	8	0	3
Fennel bunch	0	3	0	0	Spinach bushel	2	0	3	0
Garlic lb.	0	8	1	0	Tomatoes per doz.	2	0	3	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	0	0
Horseradish bundle	2	6	4	0	Vegetable Marrows, dz.	1	0	2	0

TRADE CATALOGUES RECEIVED.

J. Kellett, Nurseryman, &c., Wellington Nursery, Heaton Chapel, and Green Lane Nurseries, Heaton Norris, Stockport.—*Dutch and other Flowering Bulbs.*

John Cranston, King's Acre, near Hereford.—*Catalogue of Selected Roses.*

TO CORRESPONDENTS.

.. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

ABELMOSCHATUS (*Lady King*).—Your Indian correspondent must have meant *Abelmoschus*, once a genus of plants, now united to *Hibiscus*.

FERNS (*A Constant Reader*).—"British Ferns," by G. W. Johnson. A new edition has just been published, and can be had free by post from our office if you enclose forty-four stamps with your address.

GOLDEN-VEINED LEAF OF PELARGONIUM (*P. S. W.*).—We should like to know the history of this plant with reticulated leaves, which is a new feature among the Zonal Pelargoniums. Cannot you bring a plant of it to the Floral Committee, where its merits would be decided? It is certainly very curious.

VIOLA CORNETA (*Justicia*).—The specimen you enclosed is true. We cannot decide upon mere surmise. The succession may not have been as you say, or if it was, an interval may have been between the death and the succession.

SEEDLING FLOWERS (*N. R.*).—Not one of them is superior. They are good average border flowers.

BOOKS (*Pomophilist*).—London's "Suburban Horticulturist" was published by W. Smith, years ago a bookseller in Fleet Street, but now gone. It can only be obtained second-hand. McIntosh's "Book of the Garden" is published by Messrs. Blackwood. Price of Vol. I., 50s., and of Vol. II., 35s. 6d. (*J. Currie*).—We do not know the book you name.

BLACK VARNISH FOR RAILING (*H. Bright*).—Hill & Smith's Patent Black Varnish. Their office is 22, Cannon Street, West, London. Their manufactory is at the Brierley Hill Iron Works, Dudley.

BLACK MOROCCO GRAPES CRACKING (*Perillo*).—This Grape is very subject to crack, and we attribute it to the roots being in a wet border, and to excessive humidity in the atmosphere of the house. The only remedy that we know is to keep the soil moist or well watered during the early stages of growth of the Vine, and after the fruit changes colour, the border being then all right as to moisture, to keep water away from the border, and if the latter is exposed, to protect it from rain by a water-proof covering of some sort, and to keep the atmosphere as dry as practicable.

PEAR TREE IN PAVED YARD UNFRUITFUL (*R. W.*).—Early in March make holes with a crowbar between the paving stones, and about 1 foot apart, 18 inches to 2 feet deep (not more), and commencing 2 feet from the stem proceed onwards to a distance from the stem all round equal to the height of the tree, and with a watering-pot fill the holes with water, renewing it half-a-dozen times at least as the water subsides. When the tree has thus had a good watering fill the holes with good rich soil, and if the tree has a great number of trusses of bloom thin away half or one third, according to their closeness together. When the blossoms are losing the petals give a good watering over the stones, and the water will find its way down to the roots by the openings made with the crowbar, then fill these with fine soil.

GOLDEN-VEINED PERIWINKLE LOSING VARIATION (*W. D.*).—The golden variegation will return when the plant's growth is lessened. The only thing you can do to cause a speedy return to its abnormal state is to plant it in rather poor soil in a somewhat shaded and warm dry situation. The planting in rich soil would not contribute to the return of the variegation, but, on the contrary, retard it.

MURTL DISEASED (*A. H. J. L.*).—The leaves sent to us appeared destroyed by the ravages of thrips, though the evidences of their presence are obliterated by the washing with water. The leaves of the tree, if at all like those sent, will all fall. We would advise the syringing of the tree with a solution of 4 ozs. of soft soap dissolved in a gallon of tobacco water; one gallon of the tobacco water from the tobaccoist should be diluted with six gallons of water, and a gallon of the diluted tobacco water is to be used for syringing, holding in solution 4 ozs. of soft soap. The tree being thoroughly wetted, both on the under and upper side of the leaves, allow the mixture to become dry upon the tree, and then wash it off with water at a temperature of 120°. In a week repeat the washing or syringing with the tobacco water and soft-soap solution, and syringe the tree twice a-day afterwards for a week or ten days with water, keeping the soil no more than moist, as the demands of the head will be at a minimum, and avoid a state of the soil approaching wetness through the winter.

PLANTING ROSES (*T. J. H.*).—We would not advise the planting of dwarfs between the standards, for it is not conducive to the well-being of either, and does not contribute to, but is destructive of, good effect. In place of standards we would plant dwarfs on the Manetti stock or Briar if your soil is heavy and cold, for dwarfs are better adapted for beds than standards, and they have an advantage over the standards in case of a severe winter like the past. Avoid overcrowding and too close planting. A few good well-grown plants are far more satisfactory than a number crowded and badly grown. Your horse and cow manure obtained in July, being now well-turned and mixed, will be in a fit state to dig into the ground in October, and be proper for planting Roses in November.

WINTERING LOBELIA ST. CLAIR, ROSES IN POTS, and CALECEOLARIAN (*H. C.*).—The *Lobelia St. Clair* is all but, if not quite hardy, surviving in a well-drained soil over the winter with a covering of half-decayed leaves or litter manure 3 inches thick, or, if grown in pots, may be plunged under a wall or fence in a dry, warm situation, and a thin covering of leaves or litter will make them safe for the winter. The pots should be plunged an inch deeper than the rim of the pots to allow for the settling of the ashes. The *Roses in pots*, early in October, may have the pots plunged in coal ashes, covering the rims of the pots, choosing a warm and dry situation, sheltered from cold winds, affording them protection in cold, frosty weather by a little dry hay or straw between and over the shoots, removing it in mild weather. *Caleceolarian* should be wintered in a cold frame, the cuttings being put in at the close of this or early in next month, keeping them well aired, but protected from heavy rains by drawing on the lights, and from frost by a covering of mats and straw in addition to the lights, 6 or 8 inches of straw over the lights being sufficient protection. During very frosty weather the covering need not be removed, but remain on day and night and after the frost until the ground be thawed.

RED SPIDER IN ORCHARD-HOUSE (*T. G.*).—You may take two 12 or 13-inch flower-pots, and half fill them with fresh unsifted lime. The house should then be shut up closely, and the lime being sprinkled with water in sufficient quantity to cause it to stick, then a fair-sized handful of flowers of sulphur should be strewn over it in each pot, and allowed to remain in the house all night. In the morning the trees should be thoroughly syringed in every part. This will destroy the spider, and the one syringing will not greatly damage the fruit if clear rain water be used.

WATERING PLANTS WHEN THE SUN SHINES (*O. O. O.*).—There is this much "sense" in the remark "You should not water plants when the sun is shining upon them," that it is exceptional in nature rather than the rule, the evils being that the wetting of the foliage when the sun is powerful leaves drops or wet places upon the leaves, which, being heated by the sun's rays, cause the leaves to spot or blister, and this more particularly when the air is calm and the water not dispersed by the move-

ment of the air. Further than this, its influences on the plant are not good, as, when the sun is powerful, the leaves are evaporating or exhaling, and the shock to this process by the dashing over them of cold water is anything but salutary; as by analogy, we may glean from the serious effects of a cold shower on the human body whilst perspiring freely. Let it be remembered that it is impossible to make the leaves inhale when Nature causes them to exhale: hence the watering of plants overhead when the sun's rays are powerful is absurd; and as for watering the ground during the middle of the day, it is like pouring it upon a hot plate so that it may the sooner be evaporated, and every appearance of its use be the more speedily obliterated.

PROTECTING HALF-HARDY PLANTS (Idem).—The best thing to place over the crowns of plants in winter is either cocoa-nut fibre refuse or partially decomposed leaves, and the next best is short littery manure, the dung being shaken out. Ashes answer very well when the soil is heavy; tan is not bad for the purpose, and straw will do.

CALECEOLARIA DISEASED (T. Record).—The appearance of your plants' stems certainly shows evidence of their being eaten by some grub, and the bark is entirely gone from one of the stems. Upon the other we notice traces of fungus, and that we think is the immediate cause of the death of the plants, for if the disease were the result of insects destroying the stems, it is highly probable that the part of stem below ground would push out new shoots, whereas this is seldom if ever the case, the plants perishing all at once and in a very short time from some, as yet, unexplained cause.

SOIL FOR VINE BORDERS (J. F. Smith).—The gardener is quite right. Instead of one you should have from five to six parts of turfy loam added to the sandy road scrapings.

BUDDING ROSES ON THE MANETTI STOCK (Y. B. A. Z.).—"You are right to bud them close to the ground. It is still better to scratch a groove along the Manetti line, and bud as close to the roots as possible. When Manetti stocks are planted deep they must be budded high. This has brought them into disrepute. Mr. Radclyffe planted 285 on June 7th. They are all in full leaf, and Louise Margotzin, September 4th, had two buds. You may move your dormant-bud Roses with perfect immunity. It is the best way to prevent them from late breaking. Those that have broken should be exposed to sun and air, and be protected with straw if the winter be severe. In the spring they may be cut down. Manetti suckers from the stock have sprung up this year more than Mr. Radclyffe ever knew them do before, owing to the plants having been cut down. Always keep a good body of wood on Manetti stocks."—W. F. R."

PEARS AT THE CRYSTAL PALACE SHOW.—"In your report it is stated that there were fifty-one competitors for the prize for single dishes of Pears for flavour, and that the first prize was awarded to Mr. Bailey. This is an error; the first prize was awarded to our Louise Bonne Pears, grown in a pot, the fruit set in an orchard-house, and then the pot sunk in the ground outside."—G. F. WILSON, *Gishurst Cottage, Weybridge Heath.*

HORTICULTURAL SOCIETIES IN CONNECTION WITH THE ROYAL HORTICULTURAL SOCIETY (Gaffer Greenwood).—You can have the "Horticultural Directory for 1897" free by post from our office if you enclose twenty-six postage stamps with your direction. It contains full particulars of the advantages gained by societies from such a connection, and much other information.

UNIVERSALITY OF POISON (Idem).—"How much truth is there in the expression, 'Everything that we eat in the way of food contains poison, except Carrots?'"

[We never heard before of such an apophthegm. Everything eaten to excess is deleterious, and the inditor of the apophthegm, perhaps, had no relish for Carrots, and thought no one could eat many of them.]

CATERPILLARS ON CABBAGES (G. A.).—No mode of exterminating them is so easy or effective as hand-picking. Thoroughly decayed stable manure and bone dust are excellent for Strawberries, either separately or mixed.

DOUBLE YELLOW ROCKET (J. G.).—We have made some inquiries about this plant, but the season of its blooming having gone by, we could not define its botanical relation without seeing it in bloom; but our own impression is that you are right about its not being a *Hesperis*; whether it is allied to the Cabbage or Cross tribe we are unable to say. Many years ago, when we had it, we found no difficulty in propagating it by cutting the flower-stem into lengths, and putting them under a hand-glass in a shady place, only we had to cut the spikes before they opened, which was a sacrifice many are unwilling to make.

POTATO DISEASE (J. G.).—We hope if the disease has been visible in the halm without affecting the tubers for some weeks, that the latter will escape. We have, however, not much hope of this if wet weather set in. Paterson's Blues are highly spoken of, and generally do well; but we incline to the belief that no variety is entirely exempt from disease in bad seasons, although some are more prone to it than others, and some kinds adapt themselves better than others to particular soils, and, therefore escape the disease when its attacks are not too virulent. Generally speaking, a robust—not a coarse, rank grower, escapes best; but, like human beings, entire exemption from disease is more than questionable.

PEACH-HOUSE (A Subscriber).—It does not matter whether you have a lean-to or a span roof for Peaches. A good house of the first-named form should be 12 feet wide, 18 feet in height at back, and 2 feet in front. Trees planted inside, and trained up 15 inches from the glass. A similar span-roofed house would do equally well if from 20 to 24 feet in width. There is no better plan than training the trees under the glass. With a house of the same height, or from 2 to more feet higher in front, it is common to have a curved trellis in front, and trees on the back wall; but it is doubtful if on the whole more fruit is obtained, though something is gained in the matter of succession when it is an object to have fruit out of one house as long as possible. We have a useful house, 11 feet high at back, 14 foot high in front, and 11 feet wide, with a front trellis 3½ feet in height, and 3½ feet from the back wall, which admits of enough of light to the bottom of the wall and the trees there. All things considered, but for shelves, we would prefer a trellis underneath the glass roof.

FERN (Helix-fornia).—If you require culture as well as names, &c., "The Fern Manual" will suit you. You can have it free by post from our office if you enclose 5s. 4d. with your address.

WHITE PELARGONIUMS (Virginia).—The purest white Pelargonium we have seen is one raised by Mr. G. Smith, Hornsey Road. This was delicately white, but not perfect in form. There are others, we believe, in cultivation, and we shall be obliged by having their names communicated.

VENTILATING A VINERY (G. H.).—It is not often that such a case as yours occurs, for the top of the house, however wide, is generally the warmest. However, there can be no loss in the proposed arrangement; only if we were directing it we would place the pipes nearer the back wall if there is nothing on it that the heat would injure. We think the heat then would be more easily diffused, and it would be better as respects the top ventilation.

ROSE MOUNT AT THE CRYSTAL PALACE (Lover of Flowers).—The Rose Mount at the Crystal Palace is very beautiful this season. We saw the panel border to which you refer, and of which, so far as we recollect, your plan is not correct. Such panels are pretty when looked across to, looked up to, or looked down upon, and in a circular position as at the Mount. The background of the fence, covered with green foliage, also helps. The half-circular sweeps next the fence are, as you represent them, filled with Scarlet Pelargoniums, bordered with *Colusa*; but the next sweep, instead of following the same angles, starts from the wide part of the circle. As far as we recollect, the Pelargoniums are bordered with *Colusa*, which in the next semicircle is bordered with Christine Pelargonium, the centre with Purple King Verbena, the lower side with Flower of the Day Pelargonium; the triangular pieces with the dwarf single Marigold, and the front with double lines of the blue Lobelia. The Marigold was hardly good enough for the rest of the border. Dwarf yellow *Calceolarias* would have been more telling. Straight borders when seen from either end tell best in rows, when panelled you must walk abreast of them.

BED IN CENTRE OF A GREENHOUSE (C. R. H.).—In such a bed in a greenhouse we should advise having nothing planted out except climbers, and these we would confine to little pits or boxes, set apart for them. The rest of the bed we would fill with sandy loam, and deep enough and well drained for plunging pots in it up over the rim, and removing and filling as deemed necessary. The dropping of the flowers of the Fuchsias, &c., we attribute to want of enough of moisture, and also, perhaps, a want of enough of ventilation. Pelargoniums and Fuchsias in small pots want a large amount of water. Some of the best we ever saw had it two or three times in a sunny day.

ERECTING A GREENHOUSE (O. H.).—For any definite information about Beard's Metallic Glass Houses, apply to Mr. E. J. Sanders, Victoria Works, Bury St. Edmunds, who is working out the patent. We believe that the houses are now put up at a lower price than when first described in this Journal by Mr. Fish, and that considerable improvements have since then been made. The reason as to not advertising does not rest with us. All we can say is, that if there had been any reason for Mr. Fish modifying his favourable opinion, it would at once have been made known to our readers. The objections entertained by you and your friends, as well as others, are chiefly these:—1, Glass placed edge to edge instead of the usual lap, is sure to crack by expansion and contraction. This will be the result in common putty glazing, but is not the result in Mr. Beard's peculiar plan, in which putty is altogether dispensed with, and the favourable result is chiefly the consequence of plenty of room being left at the ends of the squares, where they may expand and contract as much as they will without any damage. The second objection is that drip must fall and rain be driven in through the spaces between these lapless squares. All we can say is, that the first visit to these houses was paid after a day of drenching rain and rough wind; but there was not the mark of a single drop in the house. With glass nicely cut we believe there is no danger from either of these causes. 3, Such iron houses are so much colder than wooden ones. This is true of all iron structures; but the evil is lessened by the vitrified system as well as the galvanising, and especially by the fact that the quantity of iron used is so small, that a very little additional heating power would be needed. Much also is gained in severe weather from the absence of laps. We do not see why your gas stove should not heat your small house; but instead of a three-inch pipe from the stove all round the house, we would be satisfied with a pipe of 1½ inch; and in that case, or with your three-inch pipe, when it entered out of the house we would have a cowl over it to prevent damp or draughts entering it. We have never met with the danger the engineers speak of—the cold air rushing down and putting the gas out. We should almost as soon expect the cold air rushing down a chimney and putting the fire out; and that will be done at times, until the fire heats and expands the air near it. We should like the pipes to rise gradually from the furnace, instead of going on a level. Most likely you can obtain the gas easily, otherwise a small iron stove with a pipe through the roof would do admirably for such a small house, especially if the stove had a flat top to receive a pan of water.

GRAFTING THE VINE—EARLY TULIPS (T.).—We would not hesitate to graft the Black Hamburg on the Golden Hamburg. Meanwhile, if you are a great admirer of the Golden Hamburg, we would grow it on the long-rod system, place the Vine 6 inches farther from the glass, and leave only a moderate crop. It is a tender Vine. The following Tulips, we think, will suit you:—Double—Gloria Sella, Duke of York, Imperator and Rex Rubrum, Couronne pourpre, Overwinnaar. In addition to your Tournesols, single—Pottsbakker, white, yellow, striped; Bella Alliance, Florentine, Keizer's Kroon, Standard Royal, and Vermilion Brilliant.

FORCING STRAWBERRIES (T. H., Young Beginner).—To have Strawberries ripe in the beginning of April you would require to commence in February; and if the following month should be stormy and frosty, you will scarcely have enough of heat for the Strawberries with two four-inch pipes in your 14-feet-wide house. There is one thing, the Strawberries will not suffer from a lower temperature in stormy weather farther than not ripening so soon. More forced Strawberries are injured by a too high instead of a too low temperature. We would not repeat pot Vines now, to be forced next season; but we would rest them as soon as the leaves turned yellow, and on starting them we would give rich surface-dressings and manure-waterings. We as yet know no more of the promised treatise on Vines than what has appeared in the Journal to which you refer. Such results are more to be looked upon as what may be done, not as what is likely to be done under general circumstances.

PLANTING VINES IN EARLY VINERY (Charles).—The Vines should at once be planted, and those you have that are now growing will not do for the planting in a house where forcing is commenced in November. You should plant Vines whose wood is quite brown and hard—that is,

fully ripe, and the leaves turning yellow, and they ought to be pruned early in October. The Black Hamburg is the better of the two for an early vinery.

PRIMULA INTERMEDIA CULTURE (*Idem*).—*Primula intermedia* succeeds well in a compost of light fibrous loam and peat, or old cocoa-nut fibre refuse in equal parts with one-half grit or sandstone broken small. The drainage should be good, more particularly in winter when the soil need not be more than moist; but during the time of growing in summer it cannot be kept too moist at the root. In very hot, dry weather a slight shade is essential, and not less so in an open situation.

PRESERVING ACCURA POLLEN (*Idem*).—It may be wrapped in clean, dry, white paper, and kept in a cool, dry place.

POTTING FRUNUS SINENSIS (*A Constant Reader*).—Now is a good time to pot this shrub, removing the drainage materials and picking away with a pointed piece of wood as much of the old soil as possible; but if the ball is very hard merely loosen the sides. A compost of two-thirds rather light turfy loam and one-third leaf mould, with a free admixture of sand, will grow it well. Be careful not to overpot, but keep it in a moderate-sized pot. If the plant is not required in a large pot, you may cut away the old roots or reduce the ball and repot in the same sized pot as before.

BELLADONNA AND GUERNSEY LILIES AFTER FLOWERING (*Idem*).—Keep them with the pots plunged in coal ashes in a cold pit, affording protection from frost, and supply them well with water up to May, or you may keep them on a light and airy shelf in a greenhouse, the pots being set on a pan of wet sand up to the end of May. Do not repot the plants, but keep them well watered until the leaves show signs of maturity, then lessen the supply, and keeping the sand moist will be sufficient for the bulbs when at rest. When growing keep them well watered. Do not repot the plants until they grow and crack the pots. The bulbs will not, we think, flower next year, but in all probability they will do so in the following year.

CANKER WORM (*J. T. S.*).—The canker worm (*Anisophteryx pomatoria*), is very difficult of destruction. The moth appears early in spring. The male has wings, but the female is wingless, and, therefore, crawls up the plants on which it deposits its eggs. The larva appears towards the end of May, and is of a dusky brown or ash colour. The only effectual remedy is to destroy the female by tying strips of calico smeared with some glutinous substance, as bird lime, around the stems of these trees. We do not think that it is the canker worm which you have to complain of, but that the maggots of the Onion-fly (*Anthomyia ceparum*), are at work on your Onions. Soot applied to the ground prior to sowing is the best preventive, and powdered charcoal is excellent for strewing around and over the plants along with dry soot. The Brassy Onion-fly (*Eumerus rufus*), attacks the bulbs and spoils them. The grubs of the spotted garden-gnat (*Tipula maculosa*), cut off the stems of Strawberries, especially the flower-stalks, and the larvæ of *Othiorhynchus tenebriosis*, *Hippodamia lupulina*, and other insects prey on the roots. The only remedy is the destruction of the old and the making of new plantations in fresh ground.

BULBS (*J. C. A.*).—The bulbs you have from a late importation you will do well to keep in a dry cool place, as little exposed to the sun's rays

as possible. The sooner you plant the Crocuses the better, and the Hyacinths are all the better planted as early after this as can be. The Tulips also would be as well planted.

CUCUMBER FOR WINTER (*A Gardener*).—We consider Telegraph one of the best for winter use, but Kirkless Hall Defiance, Lord Kenyon's Favourite, and Lion House Improved are also good. It is now quite time to prepare for planting, and to get out the plants for fruiting at Christmas.

TRANSPLANTING SHRUBS (*Inquirer*).—You may with safety remove during the first showery weather after this, the large Laurustinus and Arbutus, being careful to preserve a good ball to each, and as much of the roots as practicable. The moving of them but a few feet is greatly in favour of the operation. After planting give a good watering. The large white Lilac may be moved when the leaves fall, taking the same care as to the preservation of a ball; and it would be well to take advantage of the moving of the tree and cut away any long, straggling, and bare shoots.

HOLLYHOCK SEED SOWING (*Idem*).—The seed of Hollyhocks may be sown from May up to July; the seedlings pricked off when large enough in lines 1 foot apart, and 6 inches between the plants, will make fine plants by autumn, and may then be planted out in good rich soil where they are intended to bloom. Hollyhocks are biennials, not flowering the same season as sown, but the second year.

VARIEGATED ALYSSUM (*Idem*).—It is not hardy except in well-drained soil in a warm dry situation, and in an unusually mild season and locality. It requires the protection of a house from which frost is excluded.

INESIS HEDUSTII (*Idem*).—This may be grown from seed sown in March, in pans, in a gentle heat, and the plants when large enough to handle, be potted off singly in small pots. Afterwards keep them growing in a mild hotbed, and when they become fine plants gradually harden them off, and plant out early in May. The seed, so far as we are aware, is not procurable, as the plant is increased from cuttings.

CUTTING DOWN RHODODENDRON (*Idem*).—Your Rhododendron which has become very straggling should not now be cut down, but defer doing so until May of next year, or until the blooming is past, when you may cut it down; but we are not certain that it will flower in the following year, as that depends upon the formation of bloom-buds. It certainly will not flower next spring if not cut, unless you leave bloom-buds upon it.

NAMES OF FRUIT (*R. S. R.*).—A mistake was made by us last week. Your Pears were—1, Dunmore; 2, Williams' Bee Chrétien. (*T. H., Sevenoake*).—1, Scarlet Nonpareil; 2, Blenheim Pippin.

NAMES OF PLANTS (*J. E. Cross*).—*Prunus padus*, or Bird Cherry. (*Jns. Cousens*).—1, *Tecoma radicans*; 2, possibly *Paulownia imperialis*, but specimen much too incomplete to decide upon. (*R. A. K.*).—*Spiraea Fortunei*. (*J. A. O.*).—*Scindapsus pictus*, a climbing stove Aroid. (*J. M.*).—*Spiraea arifolia*, a native of North-west America. (*D. W.*).—Seems to be a leaf of the common Taney (*Tanacetum vulgare*), but there are many allied plants with leaves like it. (*Lady King*).—Some genus allied to *Chrysanthemum*, perhaps *Gazania*, but we cannot make it out fully by means of the specimen sent. (*R. F., jun.*).—It is impossible to identify such a dried flowerless specimen.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending September 17th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 11	29.941	29.854	72	56	63	60	S.	.21	Hazy; cloudy; overcast at night.
Thurs. 12	29.877	29.694	73	46	62	59	S.W.	.00	Rain; fine; very clear.
Fri. . 13	29.937	29.905	70	42	62	60	W.	.00	Slight haze; overcast; clear and fine.
Sat. . 14	29.986	29.858	66	40	61	59	S.W.	.04	Fine; rather boisterous; rain at night.
Sun. . 15	30.086	29.968	70	40	61	59	N.W.	.00	Cloudy; fine; clear and very fine at night.
Mon. . 16	30.194	30.124	68	36	60	59	N.W.	.00	Clear; partially clouded; clear.
Tues. . 17	30.317	30.291	61	46	60	59	N.E.	.03	Overcast and cold; clear and fine; overcast, rain.
Mean	30.058	29.958	68.29	43.71	61.28	59.23	..	0.33	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

LADY HOLMESDALE'S POULTRY.

EVERY one interested in the promotion of poultry exhibitions as an honourable amusement, and for the profitable improvement of our domestic fowls, will hear with great regret that Lady Holmesdale has determined—reluctantly determined—to withdraw from the arena, and to dispose of all her justly highly distinguished stock of Dorkings and Spanish. No words we could employ could so effectively announce this as those in the following extract from a letter addressed to us by her ladyship:—"Lady Holmesdale is pleased to look back to the years she has kept poultry with unalloyed pleasure. She has found it a very pleasant occupation, and has never had any disputes or ill will with other exhibitors, which is saying a good deal, as there must be always some jealousy. She wishes she could keep them on, but her increasing occupations and absence from home render it difficult. Her chief regret is her poultry man being thrown out of employ, and she can most thoroughly recommend him. The whole of her poultry are for sale. Lady Holmesdale will never cease to feel the greatest interest in

poultry; and she is very sorrowful at the thoughts of separating herself from all the associations arising from a connection with them for so many years. If she can ever be of any use in forwarding any schemes for their improvement she will be happy to do so. She never had such a collection of Dorkings and Dorking chickens as she has now, and she must see her favourites winning shown in other names; still, if she can leave off with the good will of other exhibitors, possibly regret of some few people, she feels amply rewarded for the years she has been showing.

"If any exhibitors are desirous of seeing her poultry previous to the sale, they are quite welcome to see them any day at Linton Park."

TESTIMONIAL TO MR. HEWITT.

THE Committee for obtaining subscriptions to this well-merited testimonial have printed the following circular, and we hope the appeal will be promptly responded to, so that the testimonial may be presented to Mr. Hewitt at the next Birmingham Poultry Exhibition:—

"There is no room for doubting that poultry exhibitions have added to our list of pleasant occupations, and increased largely

the quantity and quality of our supplies. Whoever, therefore has markedly promoted those exhibitions deserves a more permanent acknowledgment than thanks.

"If we look over the list of those exhibitions, we shall find that Mr. Hewitt is employed at nearly three-fourths of them, and this fact alone testifies that his decisions generally inspire confidence in his judgment and integrity; while if we look over the catalogues of those exhibitions whose committees previously announce that he will be one of the arbitrators, the numbers of entries are evidence that he is highly respected by the great majority of exhibitors.

"It is proposed, therefore, to present a testimonial to Mr. Hewitt, and thus enable exhibitors to testify their respect and esteem for a gentleman who has judged at hundreds of shows and travelled thousands of miles without fee or reward, except expenses out of pocket, on purpose to encourage the growing taste for high-class poultry, and to benefit the societies under whose fostering care the fancy has risen to its present high standard.

"Your contribution to the funds for this purpose is, therefore, solicited, and may be forwarded to any of the following gentlemen, who have consented to act as the Committee; or to G. W. Johnson, Esq., 171, Fleet Street, London, E.C.—J. R. Rodbard, Aldwick Court, Wington, Bristol; James Fletcher, Stoneclough, Manchester; H. Tomlinson, Balsall Heath Road, Birmingham; J. R. Jessop, Hull; S. Burn, East Terrace, Whitby."

SUBSCRIPTIONS ALREADY RECEIVED OR PROMISED.

Proprietors of THE JOURNAL OF HORTICULTURE.....	£10	0	0
<i>The Field</i>	5	5	0
A Lady Exhibitor	5	0	0
An Old Schoolfellow	5	0	0
Mr. J. Allport	1	1	0
Mr. Mathew Davies	2	2	0
James Fletcher, Esq.,	10	0	0
Mr. G. Griffiths	1	1	0
Viscountess Holmesdale	5	0	0
The Rev. W. J. Mellor	2	2	0
J. Parcs, Esq.,	1	1	0
Messrs. Routledge	1	1	0
Mr. W. Stevens	1	1	0
W. B. Tegetmeier, Esq.,	1	1	0
J. Westgarth Wooler, Esq.,	1	1	0
Mr. Jessop	1	1	0

OUR SUPPLY OF EGGS AND POULTRY.

Our home producers, as a class, are probably not much given to the study of figures, or they might be struck with the vastness of the importations, of a demand that never relaxes, and a supply from abroad that continually increases—so much, indeed, that our egg merchants look upon the home source as a mere trifle in the scale in satisfying the wants of their customers. We have no accounts of the numbers brought to the markets of Leadenhall and Newgate, and only the rough estimate of a French authority, who gives the value of the poultry of the United Kingdom at less than one year's supply of eggs from abroad. Thus the annual import of eggs from the Continent averaged 73,000,000 from 1843 to 1847; it averaged 103,000,000 during the next five years, 147,000,000 for the next five years, and 163,000,000 for the next five years. In 1861 we received from abroad 203,313,360; in 1864, 335,298,240; and in 1866, 438,878,880, being in excess of one million a-day, and valued at £1,097,197 sterling. These are facts that might well astonish the agricultural mind.

At the present time, although there is much attention devoted to the subject, it is principally confined to the fanciers, and upon the best description of birds, so that poultry, and their product, the egg, have not gained any general popularity amongst persons engaged in agriculture. This arises either from a disbelief in the profitability of the occupation, or the difference between the tenure of the soil in England and that of France, from whence we derive our great supply. It is evident that more than one million sterling in value of eggs were landed on our shores that could have been raised with the greatest ease at home; and the question naturally arises, "How do foreigners thus take possession of our own markets, with all the disadvantages of having to convey a perishable cargo through the hands of shippers and commission agents, with all the risks and attendant expenses?" There has been no want of inducement in the matter of prices, as in the year 1854 the Custom-house computed the real value of eggs as low as 4s. 6d. per ten dozen; but during the last six years 6s. per 120 has been reckoned, which is also the wholesale price in France. Amongst the arrangements under the French treaty was the abolition of the

duty charged on eggs. On August 8, 1854, there was a reduction to 4d. per 120, and from that time to March 6, 1860, they were entered by the cubic foot at the rate of 8d. This mode was found less convenient, and the previous system was adopted—that of number, called great hundreds, or 120, as a unit; and eggs were placed amongst free articles.

The countries from which we derived our principal supplies will be seen by the following table, with the exception of the year 1866, where the total alone has yet been ascertained—

From	1862. gt. hds.	1863. gt. hds.	1864. gt. hds.	1865. gt. hds.	1866. gt. hds.
Hamburg	6,864	3,066	3,413	5,670	..
Bremen	15,433	10,350	3,413	1,881	..
Holland	3,501	1,363	1,306	1,772	..
Belgium	169,463	158,526	217,067	171,555	..
France	1,501,403	1,872,753	2,393,521	2,795,890	..
Portugal	13,813	4,251	6,232	1,712	..
Spain	130,628	78,828	54,465	31,328	..
Cbnl. Islands	85,226	94,487	113,294	21,617	..
Othr. countrs.	881	900	1,141	1,710	..
Total	1,936,010	2,224,414	2,794,152	3,083,444	3,357,324
Value	£593,513	£673,738	£55,028	£923,247	£1,097,197

In the volume of trade and navigation published by the Board of Trade, the average prices given for the computed value in the year 1865 were—Belgian, 6s. 2d.; French, 5s. 11d.; the Channel Islands (their own produce), 5s. 10d.; and Spanish, 6s. 3d. per great hundred. It would, however, be an erroneous impression to suppose that Belgian eggs were therefore worth more than French, the mode adopted by the authorities at the Custom House being this: to take the average prices published in the *Economist* for that year as follows, per 120:—

	s. d.		s. d.
January	7 6	July	5 9
February	7 4	August	5 7
March	5 9	September	5 6
April	5 7	October	6 9
May	5 4	November	7 8
June	5 3	December	8 7

and apply the same price to the imports of each month from all parts. The average price so applied varies from month to month, as will appear from the above quotations. Since the value attached to the importations for the entire year is the sum of the values of each month, it follows that the average value of the importations for the year varies for the several countries according to the month or months in which the bulk of those importations took place. The cargoes are shipped chiefly in steam vessels, and arrive at the ports of Southampton, London, Folkestone, Arundel, Newhaven, and Shoreham. Of the supplies from Ireland, in the absence of any positive data, it is generally supposed that they have diminished from that quarter.

The time for laying eggs takes place according to the temperature and the climate. They begin in France, and in most parts of Europe, from January to March, the forward hens laying in the earlier months, and the sluggish not until the latter. For purposes of preservation, the late eggs are considered the best. April, May, and June are the months when the production is most abundant; but in July the laying slackens, to resume a certain degree of fresh activity in August and September. In October and November, which is the season of the moult, it ceases almost wholly, and is null in the month of December.

In parts of France where breeding is carried on as a trade, there is a separate class of persons called *coupeurs*, or hatchers. The hen is seldom allowed to lead the chickens after being hatched; the *coupeurs* entrust this office either to Capons or Turkeys, the hen being more valuable for laying eggs than rearing the brood. If a similar attention to the details were given in this country, the stock of fowls which roam about the farmyard and gather corn from the thrashing, instead of being a mere adjunct and perquisite of the servants, would return sufficient to discharge the rental of many a small occupation. Such, we have understood, has been the case where the experiment has been fairly tried, and once this becomes an established notion our home supplies will increase in a greater ratio than they do at present. According to a competent authority, at this time, what with improved native and imported varieties, we possess the best stock of egg-layers, hatchers, and table fowls in the world. In no country is the management of our best poultry yards excelled. These should serve as a model for the rest; and, to bring up the wholesale results to their true national importance, all we require is an extension of the taste for bird-farming amongst those who earn their living on the land.

To show the seasons in which the laying is most active, and

the variations that take place, we give the following figures from our import tables:—

	1864.	1865.	1866.
	Number.	Number.	Number.
January	6,999,000	13,391,000	16,886,000
February	17,851,000	22,323,000	25,794,000
March	31,849,000	32,231,000	46,537,000
April	42,650,000	39,966,000	51,471,000
May	39,989,000	49,507,000	56,767,000
June	33,177,000	37,890,000	52,334,000
July	35,332,000	34,488,000	36,476,000
August	34,549,000	34,279,000	40,566,000
September	29,711,000	28,444,000	33,916,000
October	19,547,000	24,056,000	26,917,000
November	15,864,000	20,424,000	20,696,000
December	27,336,000	23,103,000	31,018,000

The increasing demand for eggs, although it has failed to elicit any corresponding or commensurate efforts in our own country, has not been lost upon our quick-witted and versatile neighbours across the Channel. The metropolis is almost wholly supplied from foreign sources, and new-laid eggs, as they are called, obtain exorbitant prices, and only reach the tables of the well-to-do classes. Those who have the good fortune to accept the hospitalities of the farmhouse, in addition to the never-failing appetite on such occasions, will discover the superiority of this portion of the fare, and will gladly return with a contribution from the hen-house. The provincial towns, with trifling exceptions, monopolise the eggs from the surrounding neighbourhoods; the small farmers who do not sit the market sell their supply to the country shopkeepers, or give them in exchange for other articles. Many cottagers contrive to keep a few fowls, and where there is no pig these act as scavengers, consuming the scraps of the family, the outside cabbage leaves, peelings of boiled potatoes, &c., and if supplied with a little corn, lay a great many eggs. There are no regular agents or dealers engaged in the trade; but the grocer or the butcher of the village takes the surplus at the usual market price, deducting his commission. The consumption of an ordinary household in the country is as much as 2,000 eggs per annum, so that the residue has no great effect upon the metropolis, or the large manufacturing towns. Indeed, it is but too probable that the care of poultry has retrograded; for as the small holdings have been absorbed by large farms, many an active, frugal housewife has been withdrawn from rural life who had the will and the means of supplying the market. Neither the cottager with his allotment (instead of his share in the village green or common), nor the artisan has range enough for producing eggs to advantage; therefore, in catering for the public, the wholesale merchant must occasionally pay a personal visit to the markets in France, and rely upon the foresight and activity of agents to meet the wants of his trade.

The egg business in France is almost exclusively confined to small farmers, by whom it is carried on in a vigorous and commercial manner, more especially in the provinces of Burgundy, Normandy, and Picardy. According to the latest agricultural returns furnished by the French Government, for forty-three departments, the value of eggs and feathers produced each year was taken at 32,500,000 francs. This was considered to be much under the mark, as the consumption of Paris alone is equivalent to 12,000,000 francs; and, although, per head, it would be less in the provinces than at Paris, it may be fairly set at rather more than half as great. The eggs, which at Paris are worth 60 francs per 1000, average 40 francs per 1000 in the country. We thus obtain a total of 100,000,000 francs, or, with the export, 112,000,000 francs (£5,680,000), as the annual value of French eggs. At this rate the consumption amounts to 2s. per head of the whole population. One of the French writers on this subject gives 7,000,000 eggs as the annual produce; and if we average sixty eggs as the number that each hen would lay, there would be, at least, 117,000,000 fowls, and these at 3 francs a-piece, would give £14,625,000 sterling as the value of the poultry stock of France. For the past year, on the same ratio of sixty per head, the eggs imported into this country represent the laying of no less than 7,300,000 hens.

From a pamphlet published by M. de la Fosse, at Goussainville, near Houdan, we select a few statistics of the trade in that immediate neighbourhood, which will give a correct idea of its importance. At the markets of Houdan, Dreux, and Nogent le Roi there are sold annually upwards of 6,000,000 head of fat poultry—viz.:—

	Per Week.	Per Month.	Per Year.
Houdan	40,000	160,000	1,920,000
Dreux	50,000	200,000	2,400,000
Nogent le Roi	35,000	140,000	1,680,000
Total .....	..	..	6,000,000

This does not include the sale of chickens, poultry, and eggs, which forms a separate trade. Every village, says an eye-witness, has its weekly markets, where farmers and their wives bring their produce for sale, in preference to selling at the farmyard. The police regulations in the markets are strictly enforced. The various products are classified before the market begins. Each person is bound to keep his assigned place, and not allowed even to uncover his goods, much less to sell, before the bell rings, under the fine of five francs. At the ringing of the bell, the bustle to uncover, the rush of buyers, and the chattering are worth while to witness. The dealers and merchants take up their stand outside the market, where they send all the products they purchase. The seller has a ticket given him, with the purchase price on it, and is paid on delivery of the goods at the dealer's stand. It seems almost incredible that even in some village markets, within two hours, such a vast amount of business can be transacted, with the greatest order and decorum. Some merchants will purchase from 2,000 to 3,000 lbs. of butter; others 20,000 to 30,000 eggs, or 1,000 head of poultry, &c., all of which are taken to their warehouse to be sorted, packed, and, perhaps, forwarded the same day to London or Paris. The current price for every commodity is fixed and known immediately after the market opens, and depends entirely on the demand and supply. At the wholesale poultry market, La Vallée, in Paris, where the poultry, dead or alive, is forwarded from all parts of France, there are a number of licensed agents, who sell by auction to the highest bidder; this market is a curious scene from four till nine in the morning, when thousands of crates of all descriptions of poultry are cleared out and disposed of.

The eggs are sold in the markets of Paris in baskets, which ought to contain 1,040 good, valuable eggs. These are counted, at the wish of the buyer, by the official agent, who verifies the *déchet*, or loss; also the size, by passing them through a ring. For such there are charges from twenty-five cents per *mil* for counting, sixty cents per *mil* for examination, and fifteen cents for passing the ring; besides these charges there are the duties collected by the Municipality of Paris. The production of eggs in France is, to a certain point, unlimited; and the attention of breeders has been drawn to the improvement of the breed by foreign additions, and modes of preservation also for long voyages. In consequence of the success which had attended the exhibition of the poultry of La Bresse (in Burgundy), a stir was created, and, on the representations made to him, the Minister of Agriculture instituted a special show for fat poultry at Paris. The fowls were distributed into five classes—La Bresse, Houdan, La Flèche, Normandy, and all other breeds. La Bresse kept the lead, gaining, after a struggle with La Flèche, the gold medal for the best fowls of any class. Much of this success was due to the strenuous exertions of the Count Lo Hon, as no region had greater difficulties to surmount than La Bresse, which constitutes the *arrondissement* of Bourg, in the department of Ain, and extends from the banks of the Saône eastward to the spurs of the Jura. The fowls have certain features to distinguish them, and the hen begins to lay in February, and for a month or six weeks lays daily, then three or four times a-week, till she has laid about 160 eggs, besides rearing two or three broods. On every farm poultry is fattened to a certain extent, and until lately was little known or appreciated at Paris, though for forty years it has been exported to St. Petersburg.

The prices of eggs per 1,000 have been at different periods as follows in the Paris market:—

	fr.		fr.
1804	38.00	1850	43.79
1826	64.50	1852	45.32
1845	48.74	1853	50.19
1846	50.27	1856	60.00

And the consumption had risen from 74,000,000 in 1807, to 174,000,000 in 1853. These are collected from ten or twelve departments which encircle the city, but more than half is furnished by Le Calvados, l'Orne, and the Somme. From the latter and the Pas de Calais are derived the English supplies. Around Houdan are the villages of Goussainville, of St. Lubin, and La Haye. Near La Flèche au Mans are Villaine and Boce; also some hamlets near St. Pierre Dive, Lisieux, Calvados, and Beauvais in the Somme—all localities abounding in poultry. The ports at which the greatest amount of activity takes place are Calais, Cherbourg, and Honfleur; at Calais the eggs are packed in cases with straw, eleven hundred to the case; and at Cherbourg and Honfleur in cases of six hundred and twelve hundred.

The total value of exported eggs, of which England received the lion's share, has been as follows:—

	frances.
1815 to 1835, an average of	2,786,000
For 1850	7,512,000
" 1858	10,418,000
" 1859	11,840,000
" 1861	17,845,000
" 1864	27,974,000
" 1865	37,650,000
" 1866	42,834,000

How these exports have been distributed will appear by this table:—

	1864. kilog.	1865. kilog.	1866. kilog.
Belgium	46,364	84,107	130,627
United Kingdom	22,095,262	29,765,361	33,458,539
Germany	15,767	35,713	
Spain	34,789	52,632	
Italy	14,799	16,117	
Switzerland	143,200	133,753	278,659
United States ..	2,156	8,370	
Other countries ..	27,120	29,719	
Total	22,379,457	30,120,772	33,867,825

—(The Grocer.)

WARNING.

ABOUT a fortnight ago I received an order to forward to a Mr. Mason, some fowls, and enclosed in the letter was a business card. Relying upon the apparent respectability of the parties, I forwarded the birds, which were of some value. Not receiving any information as to the arrival of the birds, or any communication as to payment, I instituted inquiries, and was informed by the Superintendent of Police, that "Mason is a person that does nothing else but go about the country giving orders for goods, without any intention of paying for them. He is a swindler of the Long Firm, has no home; in fact, has nothing."

Now, gentlemen, I read in your Journal, "Do not part with your money until you have the birds." So much for advice to buyers. Sellers will, perhaps, take my case as a caution, and not part with their birds until they have the money.—MERRYFIELDS.

[You are quite right. We say to sellers, Do not part with your poultry until you have a security for the money, which is easily given by the purchaser sending a post-office order made payable ten days after date. This protects both vendor and buyer.—EDS.]

LEIGH (LANCASHIRE) POULTRY EXHIBITION.

THIS poultry Exhibition has always been held in connection with the annual local cattle show; last year, however, no meeting of the Leigh Society took place on account of the cattle plague, and great were the congratulations of the supporters of this Show that they this year enjoyed the privilege of holding their customary show of cattle, particularly as this was the first grant that has been permitted for some time past to any agricultural society, with the view to ensure the complete stamping out of rinderpest. It was certainly quite a reviving feature to see cattle again holding their accustomed position at an agricultural meeting, but at the same time, the pressure to the poultry tent proved that the combined attractions of horticulture, dogs, butter, and cheese did not lessen the popularity of poultry. Everything connected with the Show went off most satisfactorily, the only drawback being the deadly gloom that most faces exhibited, as rumours of the frightful accident by railway in this locality were narrated by those parties whose fate it had been to pass on the Midland line on their way to the Exhibition. It is a matter of regret to find them not exaggerated, as at the first most of the anxious hearers considered probable.

As to the Show itself, there is no room to question that the general quality of the birds shown was far beyond that of former meetings. Many of the birds of necessity proved to be in deep moult, and no doubt this acted as a very considerable drawback, particularly in the *Game* classes. Messrs. Brierley, Halsall, and Mellor, however, exhibited specimens of unusual merit. A Black Red pullet belonging to the Rev. W. J. Mellor especially deserves mention.

The *Geese*, *Turkeys*, and *Ducks* were far superior to those exhibited at former shows held at Leigh; and in the Variety class of Ducks some beautiful specimens of Shell Ducks, Carolinas, and Grey Call Ducks were most attractive.

Among the oddities that were shown was a pair of the common English Barn Owls, entered at five guineas (!), and their anxious owner had placed a placard on their pen, "requesting the public not to touch these birds," which some passing wag had altered to "The public are requested not to purchase these birds," a piece of advice by no means necessary, though causing many a passing smile. Another curious living curiosity was to be seen—viz., a cuckoo-coloured hen with four legs, three of which were evidently used for locomotion. It was

by no means a pleasing spectacle, and the feeling of disgust was somewhat general. Such monstrosities are best suited for the purposes of the penny showman.

The day proved exceedingly fine, and the attendance of visitors was such as to ensure success in a pecuniary point of view.

GAME (Black-breasted Red).—First, C. W. Brierley, Middleton. Second, Rev. W. J. Mellor, Colwick Rectory, Nottingham.

GAME (Brown Red).—First, C. W. Brierley. Second, J. Holland, Manchester.

GAME (Any other variety).—First, Rev. W. J. Mellor (Black-breasted Red). Second and Highly Commended, J. Halsall, Ince, near Wigan (Duckwing Game.)

SPANISH (Black).—First and Second, N. Cook, Chowhant.

COCHINS (Buff).—First and Second, C. W. Brierley.

COCHINS (Any other colour).—First and Second, C. W. Brierley (Partridge). Commended, E. Shaw, Plas Wilmot, Oswestry (Partridge.)

BRAMA POOTRA.—First J. Gerrard, Over Hulton. Second, Miss M. Platt, Deane, near Bolton.

DORKINGS.—First and Highly Commended, S. Farrington, Chat Moss, Astley. Second, E. Shaw.

HAMBROGS (Golden-pencilled).—First, T. Wrigley, Middleton. Second, H. Pickles, Ince, Earby, Skipton, Yorkshire.

HAMBROGS (Silver-pencilled).—First, J. Jackson, Bury. Second, J. Platt.

HAMBROGS (Golden-spangled).—First, W. Parr, Patricroft, near Manchester. Second, S. & R. Ashton, Mettram, Cheshire.

HAMBROGS (Silver-spangled).—First, H. Pickles. Second, J. Jackson, Bury.

POLANDS (Any variety).—First, P. Unsworth, Lowton, near Newton-le-Willows. Second, S. Farrington. Commended, T. J. Lancashire, Bedford, Leigh (Black).

GAME BANTAMS.—First, R. Gerrard, Chowhant. Second, C. W. Brierley. Highly Commended, P. West, Wigan. Commended, J. Renshaw, jun., Barton-on-Irwell.

BANTAMS (Any other variety).—First, S. Farrington. Second, S. & R. Ashton.

ANY OTHER DISTINCT OR CROSS-BREED OF FOWLS.—First, N. Cook (Hondans). Second, C. P. Ackers, Wigan (Hondans.)

GAME COCK (Any variety).—First, C. W. Brierley. Second, J. Halsall. Commended, Rev. W. J. Mellor; J. Atherton, Middle Hulton (Black Red).

GAME COCKEREL (Any variety).—First, E. H. Woodcock, Wigan (Black-breasted Red). Second, J. Halsall. Highly Commended, R. & W. Barton, Leigh (Game Duckwing).

GAME BANTAM COCK (Any variety).—First, R. Charlesworth, Manchester. Second, C. W. Brierley. Highly Commended, R. Crompton, Leigh. Commended, R. Gerrard.

GAME FULLETS (Any variety).—First, Rev. W. J. Mellor. Second, J. Platt. Highly Commended, J. Halsall. Commended, T. Danson, Ince; E. Brough, Leek.

SELLING CLASS.—First and Second, S. Farrington.

EXTRA STOCK.—Highly Commended, P. Caldwell, Westhoughton (Fantail Pigeons.)

DUCKS (Aylesbury).—First, E. Leech, Rochdale. Second, J. Unsworth. **DUCKS** (Ronen).—First, T. Wakefield, Golborne, near Newton-le-Willows. Second, C. P. Ackers. Commended, T. Wakefield; C. P. Ackers.

ANY OTHER VARIETY.—First and Second, C. W. Brierley (Shell Ducks, Carolinas). Highly Commended, S. & R. Ashton (Grey Call Ducks.)

GESE or **GOSLINGS**.—First and Second, S. H. Stott (Geese and Goslings.) Highly Commended, H. Neild, Manchester.

TURKEYS.—First, R. Dickinson, Bolton. Second, H. Neild. Highly Commended, J. Hartley, Leigh.

Edward Hewitt, Esq., of Eden Cottage, Sparkbrook, Birmingham, officiated as Arbitrator.

LICHFIELD POULTRY SHOW.

THIS was held on the 10th and 11th inst., in connection with the Staffordshire Agricultural Society's Exhibition. The following is the prize list:—

YOUNG BIRDS.

GAME (Black-breasted and other Reds).—First, C. B. Lowe, Atherstone. Second, G. Dingle, Shustoke, Coleshill, Warwickshire. Commended, J. Upton, Alrewas, Lichfield.

GAME (Any other variety).—Prize, C. B. Lowe (Piles).

SPANISH.—First, J. R. Rodbard, Wington, Bristol. Second, J. Clews, Walsall. Commended, T. Cliffe, Hanley.

DORKINGS (Coloured, except Silver-Greys).—First and Second, Mrs. F. S. Arkwright, Derby. Commended, Mrs. Bailey, Longton.

DORKINGS (Silver-Grey or White).—First and Second, Lady Bagot, Rugeley. Commended, Mrs. F. S. Arkwright.

COCHIN-CHINA (Cinnamon or Buff).—Prize, W. H. Crewe, Etwell, Derby.

COCHIN-CHINA (Brown, Partridge-feathered, or other varieties).—First and Highly Commended, A. O. Worthington, Burton-upon-Trent. Second, J. R. Rodbard.

BRAMA POOTRAS.—First, E. Leech. Second, A. O. Worthington.

HAMBROGS (Golden-pencilled).—First, F. D. Mort, Stafford. Second, C. Havers, Iggatestone, Essex.

HAMBROGS (Silver-pencilled).—First, Duke of Sutherland, Trentham Hall. Second, C. Havers.

HAMBROGS (Golden-spangled).—First, I. Davies, Harborne. Second, T. Blakeham, Tettenhall, Wolverhampton.

HAMBROGS (Silver-spangled).—First, Duke of Sutherland. Second, G. Strongtharm, Rushall, Walsall.

COCHIN-CHINA.—Prize, G. Strongtharm.

SINGLE COCKERELS.

GAME.—Prize, T. W. Yates, Lichfield.

SPANISH.—Prize, G. Strongtharm.

DORKING.—Prize, Mr. F. S. Arkwright.

TURKEYS (Any variety).—First, E. Leech, Rochdale (Cambridge). Second, F. E. Richardson, Bromshill, Uttloxeter (Cambridge). Commended, Mrs. Dyott, Lichfield (Norfolk.)

GREASE.—First, E. Leech. Second, S. H. Scots, Rochdale. Highly Commended, T. Bantock, Wolverhampton.
Ducks (White Aylesbury).—First, E. Leech, Rochdale. Second, W. H. Crews, Etwell, Derby. Highly Commended, A. O. Worthington, Burton-upon-Trent.
Ducks (Ronen).—First, E. Leech. Second, A. O. Worthington. Highly Commended, E. Mills, Aldridge, Walsall.
Ducks (Black East Indian).—Second, J. Neville, Tamworth.

KENT AND SURREY FANCY RABBIT SOCIETY.

On September 9th, the members of the above Society met at the "Rosemary Branch," Peckham, to celebrate their sixteenth half-yearly session. R. B. Newsom, Esq., was in the chair.

PRIZES.

1. Mr. Lock. Yellow and White Doe, age four months and nine days, ears 21½ inches long, 5¼ inches wide.
2. Mr. Hyatt. Tortoiseshill Doe, age four months and two days, ears 21½ inches long, 5¼ inches wide.
3. Equal, Mr. Webb. Sooty Buck, age five months, ears 21½ inches long, 5¼ inches wide. Equal, Mr. Lock. Fawn Buck, age four months and fourteen days, ears 21½ inches long, 5¼ inches wide.
4. Mr. Webb. Black and White Doe, age six months, ears 20½ inches long, 5¼ inches wide.
5. Mr. Pace. Yellow and White Doe, age six months and eight days, ears 18½ inches long, 4½ inches wide.
6. Mr. Hyatt. Tortoiseshill Buck, age four months and two days, ears 21½ inches long, 5½ inches wide.
7. Mr. Pace. Blue and White Buck, age six months and eight days, ears 18½ inches long, 4½ inches wide.
8. SELF COLOUR.—Mr. Emmett. Blue Doe, age three months and twenty-three days, ears 21½ inches long, 5¼ inches wide.
9. FOR WEIGHT.—Mr. Vaughan. Fawn Doe, age five months, weight, 9 lbs. 10 ozs.; ears 20½ inches long, 4½ inches wide.

JUDGES.—Messrs. Lock, Ward, and Brett. Assistants, Messrs. Pace and Webb.

LONG SUTTON AND SOUTH LINCOLNSHIRE POULTRY AND PIGEON SHOW.—Among the country Societies which have shown increased spirit in their premiums, the above is rather remarkable. Fifteen silver cups, value five guineas each, and 130 money prizes, are included in the schedule.

STOCKS OF DRIVEN BEES.

I HAVE two stocks of black bees in Pettitt's twelve-bar-frame hives; one stock driven from an old common hive on the 14th of July, which on the 19th of August weighed 19 lbs. nett; the other, an old stock and a very late swarm of this season, driven and united on the 23rd of August. These have built combs in one corner of each of six frames. The outermost comb is filled with honey, but not sealed. In this state the bees have been fully a week, yet they are very busy carrying in pollen. I think they mean no more comb-building this season.

What may be the probable number of stocks produced from these two stocks the next season if all be well?—A WORKING CABINETMAKER.

[The bees of the united colony are not now likely to extend their combs. You would, therefore, assist them most materially if you could give them two or three full-sized combs, either with or without a portion of honey, such as you might probably obtain for a trifle from some one who destroys bees in the usual way. Take care, also, that there is a sufficient store of food to last the winter. You may reasonably anticipate two swarms from each of your stocks next year.]

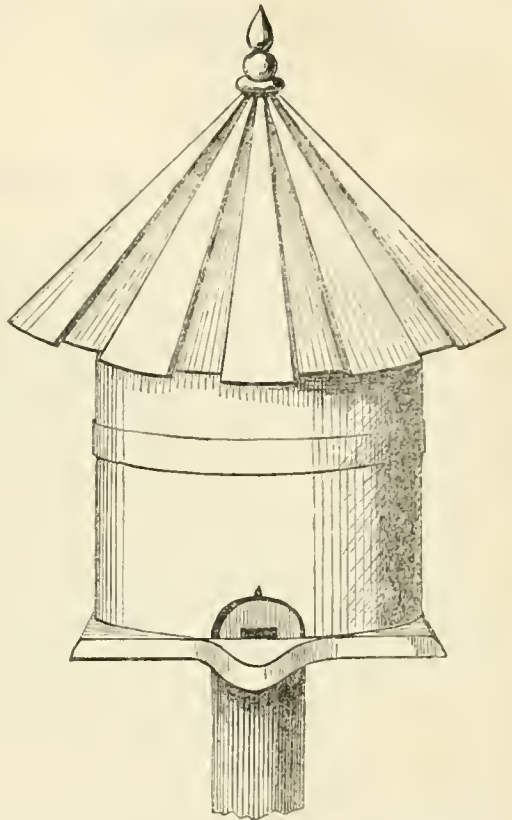
HIVE-PROTECTOR.

The hive-protectors recommended by "JOHN O'GAUNT," and a "SHROPSHIRE BEE-LOVER," are so very rude and ugly, that rather than disfigure my apiary with such an unsightly construction, I would return to the old rustic and picturesque straw hackle with all its disadvantages.

Now, in adopting any new and simple contrivance in bee hives, covers, &c., I always have an eye to cheapness, efficiency, and neatness, and if the last requirement cannot be secured, I discard the thing altogether. I have for many years used the American cheese-boxes recommended by "JOHN O'GAUNT," and they are very convenient, cheap, and effective, and if made to one gauge so as to be interchangeable, each rim made to fit

on the top of all the other rims, with a narrow hoop to cover the joint, are more convenient still.

I have made neat and good, cheap and durable covers in the



following way, requiring, certainly, a little more exercise of constructive ability than the "flour-barrel and milk-pan" cover:—

The material, old soap-boxes, may be obtained from the same source as the cheese rims. I cut the thin portions of these boxes into triangular pieces about 14 inches long and 5 broad at the base. Then to a rim about 6 inches in depth, I nail about eight of those pieces at equal distances all round the upper edge, giving the required slope, the points all meeting in the centre, where they are all secured to an octagonal piece of wood. Having made all firm I put eight other triangular pieces the same size over the open spaces left between the first eight, giving a lap of about three-quarters of an inch, secure all together to the edge of the rim with long sprigs, give two or three coats of paint, and it makes a neat and durable protection. The above sketch will better explain the result of the above operation.—G. L., Wolverhampton.

JUDGING SUPERS OF HONEY.

WHAT constitutes a first-class super of honeycomb, and how should such supers be judged by points? There is a great difference of opinion about it in this district.—N.

[We believe no rules have ever been laid down, nor so far as we are aware, has any attempt been made to judge supers by points. Still we do not see why it should not be done, and should be glad to receive suggestions on the subject.]

HONEY DISCOLOURED.

THE discolouration of honey complained of by "D. D." is not I am sorry to say, the only instance of this peculiarity. I myself removed a Woodbury super a few days ago weighing about 15 lbs. nett. in exactly the state you describe the sample

sent by "D. D." From the position of my apiary it is almost impossible that the bees could have had access to a treacle-cask, although the honey closely resembles it. I attribute this phenomenon entirely to honeydew, which has been very plentiful in this district this autumn, and in several instances I have seen the bees gathering it. Another super I removed at about two miles distant from the first, the honey is not so bad, but still very dark and not good flavoured.—G. L.

NEW BOOK.

On the Management and Preservation of Game and Ornamental Birds, and the Laws relating thereto. London: Bemrose and Lothian, 21, Paternoster Row.

The first few days in September seem a very suitable time to look into a new book on game. While the sound of the sportsman's gun is actually in my ears as I write, and I see the beaters run to pick up the unhappy, or, shall I say happy, partridges; for remember how carefully they are preserved from anything that can harm them during so many months of the year; and then, although they have to run the gauntlet with the shooter, yet how many escape! yea, only a certain number are permitted to be killed, and those that are killed die in no vulgar way, and by no vulgar hands. Then when dead the partridges are still held in honour—they are made presents of, they are received with pleasure, and on the table how they are praised! so we will call them happy partridges.

The book, the name of which is at the head of this article, is one of a new series of works for the country, and is both cheap and full of information on a subject which was formerly only to be read of in expensive works on natural history. It is a good sign in this so-called artificial and highly polished age that the love of nature still holds sway over the mind, yea, that this influence is increasing. A Frenchman makes a fortune, and lives in Paris; an Englishman makes a fortune, and lives in the country. This is a more healthy taste; the yearly advancing love of poultry among us, and the new books published, all point this way; and now we have a little manual on game and ornamental birds to help forward the good cause.

The pheasant is first spoken of, that grandest of acclimatised birds, useful hints on rearing them are given, together with a description and engraving of a pheasantry. Naturally enough after the pheasant comes the partridge, of which much is told us: among other things, how tame it becomes, and this instance is given:—"One would attend the partridge at breakfast, receive food at any hand that would give it, stretch itself out before the fire, and enjoy its warmth; but at length it fell a victim to that decided foe of all favourite birds—a cat; the dogs were too generous to molest it."

Other game birds are then spoken of, among others the capercaillie, that splendid fellow, now introduced with success in some of the most wooded parts of the Scotch Highlands. Mr. Poyntz, the former owner of Cowdray Park, Sussex (a graphic account of which appeared recently in this Journal, and a true account as well, as I can attest from personal knowledge), tried to make the capercaillie at home on his own estate, but in vain. I was startled at seeing stuffed specimens of this grand bird in different cottages in the village of Easebourne, a former cure of mine, and lying close to Cowdray Park.

The part about fen birds is to my mind the most interesting portion of the book, though I fear the ruff and reeve, common enough in my day in the fens of Cambridgeshire, are no longer to be found; for the simple reason, the fens are drained. Thirty years ago an old man, Roger Addison by name, living on the verge of "The Wash," who gained his living by shooting fen birds and snaring eels and pike, was one of my boyhood's friends. He dressed sailor-fashion; his cottage was a sort of Robinson Crusoe hut—guns, snares, fishing tackle, and stuffed decoy-birds hung on the walls or were upon the shelves. Specially did I marvel at the long gun, a cannon in bore, which when on duty was fastened into the boat, the boat being a little, narrow, cocked-hat-shaped craft, along which he lay on his stomach with shoulder to his gunstock. This old man—very rheumatic, and no wonder—took to a lad who showed an interest in his calling. He was the last of a family who had for generations been such as he was; but he was wont to speak of his father's and grandfather's times as being "the good times," for no drainage had taken place then. Old Roger used to speak of the little square gravestones in the church-

yard raised to the memory of his ancestors, and the last line of the newest stone ran thus:—

"Old Roger to come."

A few years later I was in that churchyard, and the line then read—

"Old Roger is come."

This old man first made me acquainted, among other birds, with those graceful feathered creatures ruffs and reeves, who easily betrayed their haunts by having, what I may call, their cockpits.

The redshank, another elegant fen bird spoken of in this book, is, I fear, now quite extinct.

After the web-footed fen birds there are some interesting chapters about the hare, the fox, and the stag. Concerning the last-named, we have this amusing anecdote:—"Of the stag's courage, when personal safety requires it, may be instanced the combat promoted by William, Duke of Cumberland, many years since, in an area where a stag was enclosed with a hunting tiger (chetar?). Into an area, 15 feet high, an old stag was turned; the tiger was led in hoodwinked by two blacks that had the care of him, and his eyes and himself at once set at liberty. The instant he saw the deer he crouched down on his belly, and, creeping like a house-cat at a mouse, watched an opportunity of safely seizing his prey. The stag, however, warily turned as he turned, and this strange antagonist found himself opposed to his formidable brow-antlers. In vain the tiger attempted to turn his flanks—the stag out-generalled him; and this cautious warfare became so tedious, that the Duke desired the tiger might be goaded on to the attack. It was done, when immediately, instead of attacking the stag, with a furious and elastic bound he sprang at and cleared the place, and crossing the road, rushed into the opposite, and fastening upon a fallow deer, brought it to the ground; having satiated his rage and hunger, he was easily secured by his keepers."

I forgot to mention that this little work has numerous and very life-like illustrations, and is well suited to be placed in the hands of all lovers of natural history.—WILTSHIRE RECTOR.

OUR LETTER BOX.

PHEASANTS EATING THEIR FEATHERS (*Chinese Pheasant*).—Your birds lack something, but you will no more cure them of eating feathers by giving them horse-flesh, than you would a drunkard by supplying him with drink. There is an age when they want something, and will not be satisfied unless they obtain that, or a substitute for it. Auts' eggs are the real satisfier. If they cannot be had, scoured gentles will sometimes answer the purpose. Give the greatest possible change of food, and all of a cooling nature. You may, in the way of animal food, give worms, but nothing else. We should fear you have been in the habit of giving raw food; and having withheld it they seek to eat each other. It is not the feather they want, but the bleeding stub, as that is most like raw meat. There is no bird that cannot be trained to eat its fellows by being fed on raw meat for a long time, and then deprived of it. A Pheasant or a fowl will either of them stand still while its fellows eat it, even to the death.

PEACOMB (*Brahma Comb*).—A peacomb should not be high nor coarse, 1½ or 2 inches is quite high enough. It should be thick at the base, and fixed firmly on the head. The centre should have some blunt serrations. On either side, halfway between the base of the comb and its top, should be the distinct impression of another comb, similar to the centre, projecting merely, but in no way detached.

CRAVEN POULTRY SHOW.—"The correspondent who sent an account of the Craven Show, stated that the second prize was awarded to J. Scott, of Skipton, for Game Bantams, which is not correct. The second prize was awarded to me in adults.—THOMAS HARTLEY, *Early*."

FOOD FOR PIGEONS (*W. H. B.*).—Tares, if old, are perhaps the best food for Pigeons. As to linseed, it has been found in Germany that after the linseed harvest Pigeons are frequently ill, and die of diarrhoea; so that we would advise you to give it with a sparing hand, and add a few handfuls of common dry rice to your compound of tares, linseed, peas, and barley.

BEE FLOWERS (*Corrubia*).—White Clover, Saintfoin, Trifolium incarnatum, Buckwheat, Heath, Lime, fruit trees of all kinds, Raspberry, Gooseberry, and Currant; Laurustinus, Borage, Mignonette, and Nepeta Mussini.

POT POURRI (*South Lincolnshire*).—Gather the petals of the most fragrant kinds of Roses, with which other flowers may be mixed at pleasure in smaller proportion; spread them out to dry in the sun, or in a warm room; sprinkle a little salt on them, and put them into a jar, in which they are to be kept covered up till wanted for use. Take of these Rose leaves 4 ozs.; dried Lavender flowers, 8 ozs.; vanilla, cloves, storax, and benzoin, all bruised, of each 1 drachm; ambergris, 20 grains; otto of roses, 20 drops. Mix.

POULTRY MARKET.—SEPTEMBER 18.

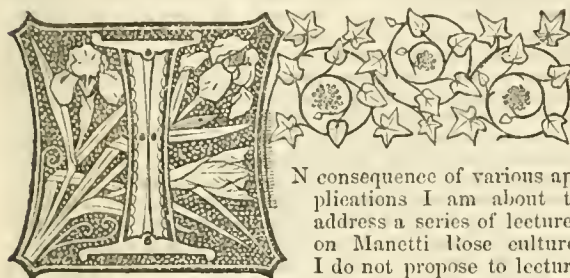
Our supply still continues to be a very limited one. Young Grouse are very scarce, and, so far as can be judged at present, Partridges are the same. There is little trade, nor does there seem to be any prospect of change either in supply or prices.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	SEPT. 25—OCT. 2, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
26	TH	Royal Horticultural Society, Promenade. 15 SUNDAY AFTER TRINITY. MICHAEL. [JAN DAY.]	65.7	43.9	54.8	19	53	45	50	45	49	43	15	41	23	8 37	269
27	F		65.5	44.7	55.1	22	55	5	47	5	3	5	43	5	23	8 53	270
28	S		64.9	43.8	54.4	21	57	5	45	5	16	6	10	6	1	9 16	271
29	SUN		65.4	44.0	54.7	24	58	5	43	5	25	7	37	6	2	9 35	272
30	M	Royal Horticultural Society, Fruit, Floral, [and General Meeting.]	65.0	43.4	54.2	23	0	6	49	5	37	8	6	7	3	9 53	273
1	Tu		63.7	45.0	54.3	21	1	6	53	5	43	9	57	7	4	10 14	274
2	W		64.5	44.3	54.4	19	3	6	53	5	46	10	11	8	5	10 33	275

From observations taken near London during the last forty years, the average day temperature of the week is 65.0°; and its night temperature 44.1°. The greatest heat was 79°, on the 27th, 1832; and the lowest cold 17°, on the 2nd, 1853. The greatest fall of rain was 1.41 inch.

CULTURE OF ROSES ON THE MANETTI STOCK.



IN consequence of various applications I am about to address a series of lectures on Manetti Rose culture. I do not propose to lecture on the culture of Briar

Roses. The works of Mr. Rivers, Mr. W. Paul, and Mr. Cranston—three admirable books—are sufficient for that purpose.

I will simply say, as regards Briar Roses, that they may be creditably cultivated by experienced and attentive persons in almost any soil, if expense be not objected to; but the proper soil for them is a deep, well-drained, unctuous clay, or a very strong sandy loam, which so few persons have.

The Manetti stock is suited to any class of land—sandy, chalky, gravelly, or clayey. In the clay soil it would require but little manure; in the sandy, chalky, or gravelly soil it would require far less manure than the Briar Rose, or the Rose on its own roots. It is suitable for shrubberies, dry soils, and places interfered with by shade or the roots of trees. In such a position here the plants have made shoots 6 and 7 feet long this summer.

The treatment of Roses on their own roots would be slightly different from that of Manetti Roses. With regard to the former, there are these excellent points—namely, when they are carefully reared to maturity, their roots and wood are more tough and hardy than in the case either of the Briar Rose or the Manetti Rose; and if their wood is inferior or injured, it can be cut down to the stump in the spring. They require, however, when fresh-struck, great care for two or three seasons at least.

As I have in different periodicals written much on Roses on the Manetti stock, it cannot be expected that I can say much that is new, and certainly I have nothing to withdraw. I must, therefore, be excused if I reproduce some of the matter before introduced to the public. Great misapprehensions have existed in time past as to Manetti Roses, but these prejudices, arising from and confirming ignorance, have been dying away gradually for some years, and converts continue coming in. In America and England the Manetti Rose is propagated by thousands—by millions—in fact, the nurserymen in England cannot propagate it sufficiently fast to supply the increasing demands of the public. No doubt the prejudice against this stock at first had some grounds, and the grounds were these—the Rose was worked too high on the stock, so that no one could properly bury the whole of the stock for two inches over the point of union, which is absolutely necessary. Now, however, either by grafting or budding low, the stock can be

buried without the roots of the Manetti being too far from the surface, and the solar and atmospheric influences which are congenial to the roots of all trees.

With regard to the introduction of the Manetti stock into this country about thirty-three years ago, Mr. Rivers wrote to me as follows:—"It is just thirty years ago [the date of his letter is January 9th, 1861], that I received one small rooted cutting of Manetti in a bookseller's parcel through Messrs. Longman & Co. Its brother, raised in the same batch, came over with it, and was called *Rosa indica grandiflora*. Our sort was called *Rosa indica Manetti*. Both were raised by Signor Crivelli, who dedicated the latter to Signor Manetti, near Lago de Como. The first-named was exactly like Manetti in leaves and habit, but not a cutting would grow; so, after some years, I destroyed it, which I now regret. So highly is the Manetti stock esteemed in the United States, that I have sent some hundreds of thousands there; and there is an order now in the house for fifty thousand more." Soon after this Mr. Cranston wrote to me, and said—"I have a stock of eighteen thousand Manetti Roses; I wish I could procure one hundred thousand stocks, I could sell the Roses without difficulty." No doubt his stock is larger now, and as excellent as usual; and I hope he will devote the greater portion of the nursery, which he proposes to occupy with Roses, to those on the Manetti stock.

I have always found the Manetti a suitable stock for all vigorous growers, except the Cloth of Gold, or dwarf and bad growers. It is suited to all the summer Roses, to almost all the Hybrid Perpetuals, to Tea-scented Noisettes, and to some of the Bourbons. For wall Roses, pillar Roses, and lawn Roses it is an admirable stock. The Manetti Rose is earlier than the Briar Rose or the Rose on its own roots. It is more continuous in blooming through the season; and it blooms later than either of the above, allowing for exceptions. In inferior lands it casts the blooms larger and fuller in the centre than either the Briar or Roses on their own roots. One thing is certain, it is not fit for standards of any height, because when exposed to sun the skin of the stock hardens, and does not expand with the growth of the stock in an equal ratio; in a word, it becomes "hidebound." It is a triumphant stock for quick pot propagation; and Mr. Cranston prefers it for pot Rose cultivation. It is easy of protection in severe winters: the way of doing so will be shown hereafter. It enables persons with inferior land to compete with those who have ground of superior quality. Mr. Keynes's land is good, but by no means equal to the Hertfordshire soil, nor is it equal to Mr. Tiley's and Mr. Turner's, and yet he has gained for years many and noble victories chiefly, but not only, by Manetti Roses, as he is also a good grower of Roses on the Briar.

The Manetti Rose can be moved at almost any time in the year with care. It can be taken from any handy nursery, and planted in August, September, or October, and established before the winter sets in. Three of my most successful Manetti plantations at Rushton, by accident, were planted three years following on the 10th of October. I brought home from Blandford on August 7th of the

present year 288 Manetti Roses, they are all alive now (September 13th), and by September 4th I pointed out to the Rev. Robert Price, my clergyman, two well-formed buds on Louise Margottin. I have removed twelve Prince Camille de Rohan, six Vicomte Vigier, and six Duc de Cazes with their new foliage and fresh-struck roots. They have, therefore, had two removals between August 7th and September 13th. On the 9th of August I planted seventy-nine more, and they are doing well.

The Manetti stock pumps up such tides of sap, and is so energetic, that in the autumn it brings its blooms to perfection much sooner than the comparatively sluggish Briar or the Rose on its own roots. The Briar Rose has three vulnerable points—the roots, the stock, and the head; but the Manetti Rose has only two points of attack, both easily defended—namely, the roots and the head. The Briar casts its suckers from the roots, but the Manetti Rose from the stock (rarely from the roots), the remedy for which will be pointed out hereafter. The Manetti Rose may be recovered when sick and scarcely alive: such was the case with Carl Coërs this spring; but a Briar Rose rarely recovers; if it does not go forward it never remains stationary, but declines more or less slowly towards death. Mr. Gill made great complaints of the mischief done to his Briars and Briar Roses last winter. In respect to Carl Coërs—a small pot plant wintered in my vinery—it was so nearly dead that I should have thrown it away had not my man said, "There is a little green in it." I cut it down to within an inch of where he said it was green, and planted it under my south wall, covering it all over with earth like a molehill. I then watered it, and left it for dead! It sprang up in due time, is a nice plant now, and has given me two series of flat, large, crimson purple flowers.

The rest of the Manetti Rose is but short—from one to two months, never more than three months. It produces so many buds that I never trouble myself to kill the bud-worm. The Manetti Rose may be pruned in winter, or in any month from January to May. You may let it form all its branches and buds, and after the bud-worm has done its mischief you may cut out what you wish to remove, and it will still have more buds than an ordinary person would think should be left on the plant. It may be budded later than any other stock known, the way of which will be shown hereafter. A Briar Rose often takes two years before it is established, but a Manetti Rose is quickly established; it may be established in forty-eight hours in hot weather if there is sufficient moisture at the roots. It is the quickest rooter known to me.

A Rose on its own roots, or on a Manetti stock properly budded, properly planted, and properly treated for that purpose, may be multiplied by Roses on their own roots (the way to do which will be shown hereafter); but the Briar Rose can never be more than one Rose. There is hope of the former, that if they be cut down, they will sprout again, but there is no hope for a Briar Rose. If the stock dies the Rose must die with it: and that has been the case this summer with Rosea on good Briars that were wounded in the stock, not in the roots and head, by the severity of the winter. One Briar Dr. Lindley, and one Briar Black Prince, that bloomed well in the fore part of summer, have since died from injury to the stock. The roots of both were perfectly healthy, and the two Roses, which are good growers, with fine foliage, and of a hardy nature, perished, owing to the death of the Briar stock. I have one of each left, and they are doing well. Two plants of Lady Suffield—a capital Rose in all respects, likewise the kind gift of the raiser, Mr. W. Paul—escaped all injury, and have grown well, and bloomed continuously.

If Roses are wanted on their own roots, the quickest and best way to get them is by natural transition from the Manetti Rose, and the way of bringing about this result will be shown hereafter. Then, as an object to please the sight, a bush plant must be better than a Rose on a "stilt." If Roses are budded on a Briar, except for pendulous or drooping forms, they should not be higher than 3 feet. For conveniently seeing them, 18 inches or 2 feet will be a preferable height; for a person must be 7 feet high to view conveniently Roses—strong growers—on a four-foot Briar. As regards Roses on their own roots, if the soil is very rich and well cultivated, and if you could get strong plants, which is improbable, I think it would be very nice. For myself I do not care whether they are on their own roots or on the Manetti stock. For poor lauds or bad cultivators, they would be simply worthless! For poor soil Manetti Roses are the best, as they do not require such a good staple, or anything like the expensive manuring that the other two re-

quire. Moreover, in rich land the Manetti Rose requires little or no manure, but simply annual or biennial removal, either in the same place or to some other. If Roses are planted carelessly and neglected, which I fear is generally the case, the Manetti Rose will beat the Briar Rose, as, indeed, the Rose on its own roots, when firmly rooted, will also do. I may truly say, that if persons do not mean to cultivate Roses properly, they had better stick to Ragged Jack, or Beans and Peas! Before I approach the subject of cultivation, I will address to such the following lines:—

"Should e'er your Fancy wish herself to please,
Let her take flight among the Beans and Peas;
But, oh! in pity, never let her try,
Her inspiration on the rosery!"

—W. F. RADCLIFFE.

(To be continued.)

THE POMOLOGICAL CONGRESS OF FRANCE.

THE twelfth meeting of the Pomological Congress of France was this year held in Paris, under the auspices and in the house of the Société Impériale et Centrale d'Horticulture of France, 84, Rue de Grenelle St. Germain. The Congress was opened on the 19th instant by an address from the President, Sénateur Reveil, in which he reviewed the past history of the Society, its present position, and its future work.

The Society took its origin at the meeting of the Imperial Horticultural Society of the Rhone, held at Lyons in 1856, when a number of pomologists being assembled from various parts, formed themselves into what was then called the Congrès Pomologique de Lyon. It had for its object the destruction of the embarrassing synonymy of fruits that is met with in nurseries, the fixing of a correct name by which each fruit shall henceforth be known, the proper description of varieties, and to encourage the propagation of good and arrest that of inferior varieties. It was found that the labours of the Society became so extended, and so many pomologists from all parts of France became connected with it, that its operations were widened, and instead of being confined to the neighbourhood of Lyons, it assumed the more universal title of Congrès Pomologique de France. For twelve years this excellent Society has been labouring faithfully in the field it has undertaken to cultivate, and this year it has for the first time held a meeting in the French capital.

In connection with the meeting of the Congress there is always a Fruit Show held, altogether independent of the labours of the Congress, and of this Exhibition we shall now proceed to give an account.

The Exhibition of fruit, which is of considerable extent, consisting chiefly of Apple and Pear, is held in a large hall in the Rue de Grenelle St. Germain, 84. The arrangement of it reminded us very much of the great fruit shows which were held in Willis's Rooms and St. James's Hall, the centre of the hall being filled with seven large tables some 50 or 60 feet in length, and 8 or 10 feet broad, on which the fruits are arranged in dishes. At the entrance and at the farther end of the hall, and in some little rooms adjoining them, are likewise numbers of smaller tables filled with fruit, the whole presenting a very good appearance without any attempt at display. The most of the fruits are legibly named, and in many instances not very correctly, in our opinion. There is, however, a great difference in the appearance of a fruit grown in France and that of the same variety grown in England; they are in general much larger, and always more highly coloured when grown in the sunny south than we are accustomed to see them. One great drawback to any one seeking information like ourselves, is the almost total absence of cards indicating by whom the fruit is exhibited.

Right in the place of honour, in the centre and extreme end of the hall, on a raised dais or platform, our countryman, Mr. Knight, of Portchartrain, exhibits his collection, and most creditably has he upheld the standard of English horticulture. His Grapes are by far the finest we have ever seen grown in France. He exhibits portions of the stem of his Vines trained on the spur system, with the bunches hanging on them; they are very good examples of that mode of cultivating the Vine, an example which the French would do well to imitate, their style of cultivation and the fruit obtained being miserably inferior to what is seen in England. Mr. Knight exhibits of Grapes, Frankenthal, the bunch and berries being of good size, not particularly well coloured; Chasselas Napoléon, which is a very handsome and beautiful Grape, not much

known in England; the bunches are large, berries oval, clear yellow, about as big as a medium sized Muscat: Black Barbarossa, or more correctly Gros Guillaume, but badly coloured; Lady Downe's well coloured; Muscat Escholata superba, or more correctly Canon Hall Muscat; Buckland Sweetwater, very clear amber, well ripened. Duchess of Buccleuch did not tell well. He had also one Cayenne Pine Apple, which was quite green; it was the only one exhibited in the hall by the cultivator, which does not say much for Pine-growing in France; 3 large Cantaloup Melons; 5 or 6 dishes of Pears, which were very fine, consisting of Beurré Diel, Duchesse d'Angoulême, Easter Beurré under the name of Doyenné d'Hiver, Flemish Beauty under the name of Fondante du Bois, Colmar d'Arenberg very fine; of Apples, very good examples of Calville Blanche, Reinette du Canada, Reinette de Caux, very handsome, and Api Noir.

M. Adolphe Berton, Propriétaire, Sceaux, exhibits about 70 dishes of Pears and 12 of Apples, and a small basket of Grapes, which consisted of small bunches of Frankenthal well coloured, and Chasselas de Fontainebleau. Amongst the Pears there were very good examples of Colmar d'Arenberg; Beurré d'Aprémont, which is the same as our Beurré Bosc; Belle de Bruxelles, handsome, but of no merit; Bon Chrétien d'Été, very fine; Martin Sec, like a large Seckle; Fondante de Noël, same as Belle Après Noël; Doyenné Boussoch, much russeted; Flemish Beauty, under the name of Fondante du Bois; Beurré Clairgeau, very large and handsome; Vicar of Winkfield, under the name of Curé; Bon Chrétien d'Espagne, large but coarse; Duchesse d'Angoulême, very large and fine; Beurré Diel, under the name of Beurré Magnifique; Beurré Sieulle; Doyenné du Comice, very highly coloured; Williams's Bon Chrétien, under the simple name of Williams, it was not nearly so good as in England; likewise the Pears *en groupe*, in clusters as they have been grown on the tree, showing how wonderfully well the Pears succeed in this country. Of Apples the Reinette du Canada was the largest. Belle Fille and Api Gros were also very good.

MM. Croux et fils, Horticulteurs à Sceaux, Seine, exhibit a very large collection of Apples and Pears, filling two entire tables. Of Pears there were upwards of 350 dishes, and of Apples 100. Of Pears there were very good examples of Joséphine de Malines; Passe Colmar; Beurré Gris; Beurré d'Albret, russety, very handsome; Doyenné d'Automne, very large and fine; Doyenné de Sterckmans, very handsome; Des Deux Sœurs; Triomphe de Jodoigne, very large; Beurré de Rance, under the name of Bon Chrétien de Rance; Doyenné du Comice, very highly coloured; Napoléon, under the name of Bon Chrétien Napoléon; Caillot Rosat; Beurré d'Anjou, very fine; Bon Chrétien d'Espagne was here highly coloured; Keens' Seedling (?) very handsome; Poire du Congrès, very large and handsome, russeted; Flemish Beauty, under the name of Fondante du Bois; Glou Morceau under the name of Beurré d'Arenberg, which is the name it is generally known by in France; Beurré Bachelier, very large and fine; Grosse Calebasse, under the name of Calebasse Monstre; Beurré Diel, called Beurré Magnifique; Beurré Clairgeau, very large and handsome; Duchesse d'Angoulême, large; Uvedale's St. Germain, called Belle Angévine; Williams's Bon Chrétien, very good; Bon Chrétien d'Auch, large and very handsome; Calebasse Tougard, same as Grosse Calebasse; Beurré Diel, true; Conseiller de la Cour; Bergamotte Cadette was wrongly named in one instance, in another rightly so; Seckel, smaller than in England; St. Michel-Archange—under this name three distinct Pears were exhibited; Beurré Superfin, medium sized, russety, and handsome; Catillac was exhibited under the name of Gilgil, which is very distinct; Van Mons Léon le Clerc, large and fine; General Todtleben, medium sized, clear skin with rosy cheeks; King Edward was wrongly named. Of Apples, Reinette du Canada was as usual very fine; Belle Joséphine, very good; Reinette de Caux, very handsome, regular in outline, and highly coloured; Muscad de Lièvre, pearmain-shaped, large, and very handsome; the Gravenstein was not true, the one exhibited resembling a Ribston Pippin; a large white Apple was exhibited wrongly as Boston Russet, as also a small white variety wrongly as Alfriston; Dutch Mignonne, very fine; Hoary Morning was exhibited under the name of Louise Van Mons; Mervillion d'Espagne, very handsome, resembling our Blenheim Pippin; Calville de St. Sauveur, very large and handsome; Pauline de Vigny resembled the Emperor Alexander; Grand-Alexandre was Emperor Alexander, very handsome; Reine des Reinettes is our King of the Pippins; Reinette Noire is a very distinct sort, dark green, russeted; Président

Napoléon and Impératrice Eugénie, two new Apples, are both very handsome varieties. Three varieties of *Malus baccifera* are likewise exhibited—the Petit rouge, Gros fruits blancs, and Gros fruits roses; also, three varieties of Plums, consisting of Mirabelle tardive, Coe's Golden Drop, and Reine Claude de Bavay.

The Société d'Horticulture de Lyon exhibit about 450 dishes of fruit, upwards of 300 being Pears, 100 Apples, 30 Grapes, and 6 Peaches. Of Pears, the most noteworthy were Bergamotte Esperen, large and fine; Bergamotte de Parthenay, very good; Beurré Bosc, under the name of Beurré d'Aprémont; Beurré Bachelier, very large and fine; Beurré Clairgeau; Doyenné du Comice, very fine; Duchesse d'Angoulême, large; Fondante du Comice, the same as Doyenné du Comice; Louise Bonne d'Avranches; Nouveau Poiteau; Vicar of Winkfield, called Curé; Madame Trégye, medium sized; Râteau Gris, very large, in shape like a Beurré Diel, thickly russeted; Gille Aiguille and Gilgil, exhibited as distinct, were the same, they were large examples of this excellent stewing Pear; Tuerlinx, enormous size, stewing; Délices d'Hardenpont, very large; Calebasse Bosc; Bergamotte de Nemours, like Bergamotte Esperen; Madotte, very large; Bergamotte Artoisenet, large, yellow, russeted; St. Lézin, large, stewing; Couleur St. Mare, medium, very handsome; Van Marum was Grosse Calebasse, very large, 7 to 8 inches long; Fondante de Charnen, very fine; Triomphe de Jodoigne, extremely large; Colmar d'Arenberg, very large; Beurré d'Avis resembled Flemish Beauty; Certeau d'Automne was the same as our Styrian; Beurré Superfin, very fine, of medium size; Chaumontel, not so large as those of Jersey; Glou Morceau, under the name of Beurré d'Hardenpont, very fine; Pius IX., clear yellow, large; Bergamotte d'Hollande, very handsome. The Apples in this exhibition were not very fine. Reinette du Canada, was the largest; Rhode Island Greening, also very good; Ménagère, large clear-skinned; Pauline de Vigny, like the Emperor Alexander; Calville de St. Sauveur, and Canterbury. Peaches were poor, the best being Bon Ouvrier, a good late variety. The Grapes were all of the small wine-making sorts of no interest.

Messieurs Jamin et Durand, Pépiniéristes, à Bourg-la-Reine, exhibit a very interesting and fine collection, about 200 varieties of Pears, and 100 of Apples. Amongst the Pears we were particularly struck with the beauty of Louise Bonne d'Avranches Panachée, our Louise Bonne of Jersey, striped, and very prettily so, with rosy red and yellow. This variety would be a pleasant addition to our fruits in England. Duchesse d'Angoulême Panachée, was here also exhibited, but the stripes were not so distinct as in the Louise Bonne; Comte de Flandres was very large and fine; Thompson's, large and much russeted; Seckel, very large and fine; Litta Douillard, and Poire Vilmoren, were also very fine; Urbaniste was wrongly named; a large stumpy brown Pear was exhibited wrongly as Bishop's Thumb; Soldat Labourer, was very large and fine; Gros Rousselet, very handsome; Doyenné d'Été, and Ne Plus Meuris, both very large and handsome; Jalouse de Fontenay, much russeted and handsome; Joséphine de Malines was here very large; Professeur du Breuil, large, rounded, bright rosy red, extremely handsome; Crasane d'Hiver, extremely large; Baronne de Mello, very fine; Poire Gendron, large, much russeted, with rosy cheek; Belle sans Pépins, same as our Belle et Bonne; Gile-à-gile, as it was spelt, was here again very handsome; Léon Leclerc d'Hiver, very large and fine; Flemish Beauty, under the name of Fondante du Bois as usual, very fine; Beurré Bachelier, very fine; Duchesse d'Angoulême, Beurré Clairgeau, Nouveau Poiteau, and Beurré Diel, were all very fine; Doyenné du Comice, exceedingly handsome, this we observed was in every collection, and is much esteemed; Beurré de Rance was exhibited as Bon Chrétien de Rance, the name which it appears generally to go by in France; Uvedale's St. Germain, very large, called Belle Angevine, this is the name of the monster Pears which are exhibited in Covent Garden Market; Van Mons Léon le Clerc, and Colmar d'Arenberg, very large and fine; Grosse Calebasse, called Van Marum, was very fine; Beurré Superfin, very handsome; Napoléon, large and fine, called Bon Chrétien Napoléon; Glou Morceau, under the name of Beurré d'Hardenpont, very fine. Amongst the Apples, by far the largest was Belle Dubois, it was immensely so, indeed it was the largest Apple we have ever seen; Reinette du Canada, which is the most generally useful Apple in France, was very fine, it takes the same rank in France as the Blenheim Pippin does in England, a variety, by the way, which we do not recollect observing in the entire Exhibition; Reine des Reinettes was exceedingly handsome, it is very much like our Golden Reinette or King of the Pippins; Belle du Havre, Cal-

ville Blanche, and Pomme Suisse, were all very handsome; Reinette Très Tardive, very large, much russeted; Cox's Orange Pippin, very fine; Lemon Pippin, very large, scarcely recognisable; Reinette de Caux, and Calville de St. Sauveur, were also very fine; Ménagère, a large kitchen variety; Reinette du Canada Grise, was also large and very handsome.

Messieurs Rouille Courbe, Tours, exhibit 140 varieties of Pears, and 120 varieties of Apples. Amongst the Pears, the most remarkable were Mamsuette Solitaire, which was very large; Léon le Clerc de Laval, very fine; Espérine, very good; Duchesse d'Angoulême, Doyenné du Comice, Beurré Clairgeau, Williams's Bon Chrétien, Colmar d'Arenberg, and Urbaniste were very large and fine; Beurré Six was monstrously large; Glou Morceau, called Beurré d'Hardenpont, Grosse Calebasse, called Calebasse Royale, and Beurré Bosc as Beurré d'Apriemont, were also all excellent examples; De Tongres, very handsome, russeted; St. Michel-Archange was here very fine; Duchesse d'Angoulême Panachée, exhibited as Duchesse Panachée, was very handsome; if it would colour as well in England it would be a very pleasant acquisition. Amongst the Apples, Ménagère, a large kitchen variety, was conspicuous; Belle Dubois and Reinette du Canada were also very fine; Alfriston, Bedfordshire Foundling, Grand Alexander same as our Emperor Alexander, Wellington, Pomme de Naples, Calville de St. Sauveur, and Calville Blanche were also very fine. M. Combe also exhibits 6 dishes of Peaches and Nectarines; amongst the latter was the Pimaston Orange, under the name of Stanwick.

M. Lelendais père, Pépiniériste, Caen, exhibits 125 varieties of Pears and 80 of Apples. There were not many very remarkable in this collection. Of the Pears, Beurré de Rance was very highly coloured and large; likewise Doyenné du Comice. Bon Chrétien d'Hiver, exhibited as distinct, seems very much like Beurré de Rance. It is somewhat greener, but that may be accounted for by its having been grown in the shade; we have little hesitation in saying they are synonyms, as exhibited here. Glou Morceau, exhibited as Beurré d'Hardenpont, Doyenné Sterckmans, Beurré Clairgeau and Bezi Mai were likewise fine examples. Amongst the Apples, Reinette de Caux was very fine; Pigeonnet Rouge, very pretty; Ménagère; Dumelow's Seedling, Grand Alexandre, same as Emperor Alexander, Roi des Pêpins, our King of the Pippins, and Biborel, a handsome dessert variety, were very good.

Baron Philibert, à Menilmontant, Paris, exhibits 120 varieties of Pears, a few Apples and Plums. Amongst the Pears we got the first glimpse of Marie Louise, which we had looked for, but in vain, having expected to find some fine examples of this our favourite English Pear; those exhibited here were very poor. Triomphe de Jodoigne was large; Doyenné du Comice, exhibited as Beurré Superfin, was very good; likewise Louise Bonne d'Avranches, Beurré Gris, Colmar d'Arenberg, Beurré Diel, and Duchesse d'Angoulême.

La Société de Melun et Fontainebleau exhibit 100 varieties of Pears, 20 of Apples, 9 of Peaches, 7 of Plums, and some Chasselas Grapes. Amongst the Pears, Beurré de Montgeron was very handsome; likewise Duchesse Panachée—Duchesse d'Angoulême, beautifully striped; Napoléon was here exhibited with bright rosy red cheeks, a colour which we in England can scarcely believe it would ever attain; it is exceedingly pretty. Doyenné d'Automne, very large and fine; Beurré Diel, very large; Beurré Hardy, large and handsome; Colmar d'Arenberg, extremely large; Flemish Beauty, called Fondante du Bois, was very highly coloured; Glou Morceau, as Beurré d'Hardenpont, very fine; Louise Bonne de Jersey, almost quite red; Bon Chrétien d'Hiver and Bon Chrétien de Rans were here again indistinguishable from Beurré de Rance, they were very large and fine; Doyenné Sieulle, very fine and large. Figue de Naples was exhibited as Beurré Bronzé. Beurré Clairgeau, Duchesse d'Angoulême, Chaumontel, Pie IX., Triomphe de Jodoigne, and Bergamotte Crasanne were likewise very fine; Bon Chrétien d'Auch, Catillac, and Bon Chrétien d'Espagne, stewing Pears, were all very large. Amongst the Apples, Belle Dubois was the largest; Reinette du Canada, Reinette d'Angleterre, and Calville Blanche were also very fine. Of Peaches, Impératrice Eugénie was large and beautiful; Bon Ouvrier, very fine late Peach; and Chevreuse tardive. The Plums consisted of Coe's Golden Drop, named simply Coe's; Reine Claude Violette; Jefferson, named Washington; Grosse Mirabelle, &c.

La Société Conlommier, Seine et Marne, exhibit 82 varieties of Pears, and 26 of Apples, likewise a very large collection of cider Apples and Pears. In this exhibition there were some

fine fruit, especially Beurré Clairgeau, Louise Bonne d'Avranches, Glou Morceau; Duchesse d'Angoulême, very fine; Louise de Prusse, yellow, large, but not good; Colmar d'Arenberg, very highly coloured; Beurré Diel; Doyenné Blanc, very large; Beurré Gris; Napoléon, with rosy red cheeks, extremely handsome; Doyenné du Comice, very fine; Chaumontel, Triomphe de Jodoigne, Beurré de Mécord, same as Doyenné Boussole, very large; and here again we met Marie Louise, named Marie Louise Delcourt, poor specimen. Of stewing Pears, Uvedale's St. Germain, called Belle Angevine, Gilgil, and Bon Chrétien d'Espagne, were very good. Amongst the Apples, the largest were Belle Dubois, Reinette du Canada, Reinette de Caux, Calville Rouge, and Calville Blanche.

La Société d'Horticulture de Metz, exhibit a very large collection of Pears and Apples. Amongst the Pears, Calebasse Royale was very fine, this was different from Grosse Calebasse, as generally exhibited; Beurré Diel was very large, it was spelt Beurré d'Yel; Bon Chrétien d'Hiver was here the same as Bon Chrétien d'Auch, there seems to be much confusion as to what Bon Chrétien d'Hiver really is; Certain d'Automne was here again the same as Styrian; Glou Morceau, very fine, under the name of Beurré d'Arenberg; Catillac was wrongly named Beau Présent d'Artois; Culotte de Suisse was small, but beautifully striped.

M. F. Mauduit, Pépiniériste, Rouen, exhibits upwards of 200 varieties of Apples, they were not large, but very highly coloured. The greater portion consisted of our best English sorts, much improved by the bright sun of the south. Our Blenheim Pippin was represented here under the name of Pauline de Vigny, in some other collections as Reinette d'Angleterre; Reinette à Feuilles d'Aucuba, was slightly striped, and very pretty.

There were several other collections exhibited of Apples and Pears; but the most of the varieties having been already noticed, we shall not enter into them in detail, with the exception of that of M. Grégoire-Néllis, Pomologist, Jodoigne, Belgium, who exhibits about 120 varieties of unnamed seedling Pears, and 48 new named varieties. Respecting the seedling varieties we can say but little, further than that they are a great many more than are wanted, even if they were all good. Judging by their looks there was nothing attractive amongst them. Of the named varieties the most attractive-looking were Delpiere, large, russeted; Incroyable de Beaurainy, very large, resembling Doyenné du Comice; Docteur Lenthier, greenish yellow; Souvenir de la Reine des Belges, medium sized, in shape like Beurré Bosc; Fulvie Grégoire, large, russeted; President Muller, resembling Marie Louise; Viceroy d'Egypte; André Murray, of medium size, much russeted; Consul Ed. Laddé; Prince Impérial de France; La Transylvanienne; T. T. Gelian; and Nouveau Zéphirin, flat Bergamot-shaped.

The celebrated Peach cultivator, M. Lepère, of Montreuil, exhibits 12 dishes of Peaches. Some of them were very fine, but not more so than those of English growth; however, it is now somewhat late for Peaches in the neighbourhood of Paris. The Chevreuse, Belle Bausse, and Bon Ouvrier were the finest. The Stanwick Nectarine was small and cracked as it does with us; it was spelt Stanwsight.

M. Chevalier, of Montreuil, exhibited a very handsome seedling Peach named Belle Impératrice, in the style of the Bellegarde, large and handsome. This we think will prove an acquisition on account of its large size, handsome appearance, and the late period at which it ripens. It is excellent in flavour, and the flesh separates freely from the stone.

Mr. Ferdinand Gloede, of Beauvais, exhibited several Strawberries and Raspberries. Amongst the former is his Perpetual Pine. There were not many fruits sent. It is rather small, conical, deep scarlet, firm-fleshed. Judging by the fruits sent, one would be apt to condemn it, but we must not be too rash. Although not first-rate in itself, it is a break in the right direction, and will form the basis of a grand race of perpetual-bearing Strawberries. M. Gloede also exhibits an excellent dish of Belle Bordelaise, a Hautbois Strawberry; it is in every way excellent, and ought to be much more cultivated than it is. There was also a dish of a variety of Alpine Strawberry, Guillon sans filets, which was very good. These are much cultivated about Paris, and may be met with in every restaurant. Of the Raspberries, Merveille des Quatre Saisons Jaune and Rouge were the best. Cataurissa, an American variety, was also very fine and large.

M. Ocquidant Nolette, Pépiniériste et Vigneron, Cote d'Or, exhibits about 100 varieties of Grapes for the dessert and wine-making. They were nearly all small sorts; the largest being

Frankenthal, Chasselas de Fontainebleau, C. Croquant, Blusard Blanc, De Candolle, Malaga, and Morillon blanc.

M. Gandais, Nice, exhibits some very good Grapes, one very large bunch of De la Palestine, which is our Syrian; Muscat of Alexandria not very good; Chasselas de Fontainebleau; Tokay des Jardins, deep rose; Perle Impériale, medium, black, oval; Impériale Noire, large bunch, round berries; Perle Impériale Blanche, good size, oval; Muscat de Têcéron, white, slightly oval; Têcéron (Olivetto do Cadenet), greenish white, oval, large; Chasselas Crystal du Cap de Bonne Espérance, like the Royal Muscadine.

M. Victor Chatel, Propriétaire, Valcongrain, exhibits several varieties of Grapes which he uses for wine making and dessert. Muscat à Fleur d'Oranges is much esteemed as a dessert variety; it is our Chasselas Musqué. Chasselas de Fontainebleau much esteemed; Chasselas flatif de Têcéron is about a fortnight earlier; Gros Marocain (Black Morocco), is much esteemed for late work, but is very subject to mildew; Frankenthal; Petit Corinthe, white; there are only three or four berries in the bunch that swell off to the right size, the rest being all small and seedless, hence the name given to it at Constantinople, "La Poule et ses Petits"—the hen and her chickens.

A collection of some 20 or 30 varieties of Figs on the branches was exhibited from Marseilles, showing their wonderful productiveness. Bourjasotte Grise and Bourjasotte Blanche were very good; Col di Signora Bianca and Col di Signora Nero exceedingly so; very rich and firm. Monaco Blanco, large; Figue Panachée, beautifully striped with yellow; d'Or Bifera, and several others, the most of which are in the fine collection of the Royal Horticultural Society, at Chiswick.

THE ORCHARD-HOUSE.

THE great mistake connected with orchard-houses has been the supposition that there is a royal road to fruit-growing. Mr. Rivers has partly paved the way for this idea by saying in his admirable book, "There can be no failure." No doubt that position is fortified by certain conditions, and it is true to a considerable extent that if these are properly carried out the result assumed will be attained; but in order that this may be the case two things are necessary—some little acquaintance at least with the habits of fruit trees, and, more especially, a love for their cultivation. This latter is essential, for without it there will be neglect, and neglect will inevitably result in failure.

To those who have realised the conditions I have named the growth of fruits in orchard-houses is almost certain to prove satisfactory. The uncertainty of growing the finest varieties of Pears and Plums in the open air verges on an utter failure, and as to Apricots, Nectarines, and Peaches, there is no obtaining them in any shape without walls; and with walls, it would not, I apprehend, be difficult to show that the orchard-house is much more certain. In all this, the conditions above named must be kept in view. These statements, however, are only preliminary to facts connected with my own experience. It is well for general statements to be thus confirmed and supported.

My experience in orchard-houses dates from November, 1861. I had a Green Gage Plum tree in my garden for fifteen years, and during that time ten dozen Plums formed the extreme amount of the produce. I kept the tree year after year—partly from the feeling, which prevails to too great an extent, of not liking to do away with a tree one has planted and seen growing for a length of time, and partly from the hope of better results—but one fine day, perceiving no improvement with the lapse of time, I summoned resolution and got rid of it. A bush of the same kind of fruit in my orchard-house, 2 feet high and 2 feet in diameter, brought me this year, after thinning, seventy-eight Plums. I had Coe's Golden Drop in the open ground for twelve years, and never had a Plum from it; a bush in the orchard-house in a 12-inch pot is now bringing to perfection thirty-four. I hoped to have given an equally promising report about Gansel's Bergamot Pear; but here there is some little disappointment. A dozen or so set in the spring, and grew as large as good-sized marbles, but unhappily fell off, with the exception of one fine Pear, which remains and is coming to perfection. This, however, is a step in the right direction. I had an espalier of this fruit in my garden for twelve years, well trained, and never had a Pear off it. I shall at least have an opportunity of tasting this much-lauded Pear, about the flavour of which I am at present quite in the dark.

Here I may say, for I wish to state matters fairly, that my Pear trees in pots for some reason have not done well this year, but four planted out on the border have all of them yielded a good crop. The trees are about 5 feet high, and from 2 feet to 2½ feet in diameter. A Bon Chrétien produced fifteen Pears 5½ ozs. each; Beurré d'Arenberg, thirty-six; Louise Bonne, forty-eight; and Bergamotte d'Esperen, seventy-five fruit.

Not having a wall in connection with my premisses, I had no experience whatever of Apricots, Peaches, and Nectarines until I adopted the orchard-house system. The produce this year of four Apricot trees, two in pots and two planted in the border, is eighty-three. I do not perceive any particular advantage in planting this fruit tree in the border, notwithstanding what has been said about their supposed failure in pots. In my case the pot trees are about on a par with those in the border. The Nectarines have done well, four trees after thinning producing exactly one hundred fruit, an average of twenty-five to each. The Peaches have done moderately, five trees producing seventy, some of them 8 inches in circumference.

In addition to the Plum trees I have mentioned I had sixty on an Early Favourite. A bush of Kirke's produced forty, some of them weighing 1½ ozs. A Jefferson had upon it eighteen, the weight of some of these 3 ozs. There are twenty-seven on an Ickworth Impératrice; and a Reine Claude de Bavay furnishes forty-four. The foliage of this Plum is very fine; I measured one leaf 8 inches long from the stem, and some of the fruit weighs 2 ozs.

In order to give as fair a report as I can, I will add that my two lean-to houses contain forty-six trees, varying in age from three to seven years from the bud; thirty-six are in 12-inch pots, and ten are planted in the border; thirty-seven had more or less upon them, and nine were fruitless. In my house I have managed to keep down aphides and red spider without using tobacco and sulphur, brushing off the insects as they appear, and giving constant and abundant syringing till the end of August. I now perceive some appearance of the red spider; but if the trees are healthy and green on the 1st of September they may be considered in the main right for the season.

One of the most important points in orchard-house culture is the proper ripening of the trees. This may seem a simple operation, but it is in reality a very nice one, and is not to be learned in a day. It requires special attention, too much water being almost as mischievous as too little.

What a pity it is we cannot obtain more certain data about the season in which different kinds of Pears ripen. There is no dependence on the definitions in the various lists. Josephine de Malines and Bergamotte d'Esperen are represented as being in season during March and April.* What I had of these varieties last winter was in perfection before the middle of January. When once one can make an impression with the thumb upon a Pear it is on the verge of perfection. It may become a little softer; but my opinion is that as regards flavour it is better at that time than in any of its after-stages, and a very short period after that will suffice to render it comparatively worthless.—J. M.

BEDDING PELARGONIUMS.

"Which do you consider the best—most telling in effect—of the Pelargoniums for bedding purposes you have seen this year? My purse is not a long one, and I shall not go to long prices; but I should like to hear of some Pelargoniums, horse-shoe foliage preferred." Now this question, which reached me some time ago, I have not replied to, because there were a few places I wished to visit where I knew I should see some Pelargoniums, and could be better able to answer my correspondent's question after I had seen them. The question is somewhat vague, for no mention is made whether they are to be Neseags or the ordinary Zonal varieties, or what coloured flowers are sought for, nor what varieties the writer already possesses; but surmising that I know nothing on these points, I shall endeavour to give the result of my observations.

Were I asked which was the most effective Pelargonium I have seen this year, I am bound to say that notwithstanding I have not yet got over my objection to Neseags, it must be Stella. I saw a long strip of it in a ribbon border at Linton Park, and it far eclipsed everything else; but then it was

* Hogg's "Fruit Manual" names February for the first-named Pear and January for the second.—Eds.

looked at from a distance, and for large park-like parterres like that I know nothing more effective. I think it is better than Cybister, throws its blooms better above the foliage, and is altogether freer. It is impossible as yet to judge of the effect of varieties of which one only sees two or three; but I am very much mistaken if Lady Constance Grosvenor sent out by Mr. Turner, of Slough, and King of Nosegays by Messrs. Downie, Laird, & Laing, of Forest Hill, are not likely to eclipse it and take the honour of the first position. They are better-formed flowers, fuller in the truss, and do not blacken off so much in the centre.

In the scarlet Tom Thumb style I have as yet seen nothing to beat Editor. It is somewhat taller in growth than Perfection; but then its freeness of flowering and size of truss make it so desirable that I wonder that it is not more generally grown. Next amongst scarlets with a fine horseshoe foliage I would rank Excellent, sent out by Messrs. F. & A. Smith, of Dulwich, although raised, I believe, by Messrs. Windebank and Kingsbury, of Southampton. It is a flower of good form; the habit of the plant is good, and the flowers are abundantly produced. There are a great many fine varieties, splendid in form, with great substance; but then there not one truss is produced where three or four of the others are. Such kinds as Clipper, Provost, Dr. Lindley, &c., are most valuable for pot culture, but they fail in effect in beds. There is one kind, however, which I fancy is likely to combine both properties. It is Sir Fitzroy Kelly, raised by Mr. Groom, of Ipswich; but, as I have already said, it is very difficult to judge of these new varieties where only three or four plants at most are seen.

Amongst the rose-coloured varieties I think Rose Rendatler is the best I have seen—that is, by applying the same rule. For size of flower, substance, and beauty, Beauté de Suresnes is undoubtedly first; but then its flowers are sparsely produced—too much so for bedding purposes, while Rose Rendatler is very fine. Lucius, a bright rose, is another fine flower, and was exceedingly good at Battersea, where it is the favourite in its shade of colour, and ought to be more generally used. It does not, like Christine, seed so very freely, and hence is very useful. Eve, a soft pink, with large flowers, I have also seen very effectively used; and Miss Martin, a soft warm rose, promises well; but it is new, and has its character to make.

Amongst whites, which after all do not make much of a show, the only advance on Madame Vaucher is Purity, which deserves its name for its exceeding whiteness; and a new one, *Alba floribunda nana*, equally well named, for the plants I had of it were a mass of flowers.

These, then, are the most effective and telling flowers that I have seen this year. Persons may be surprised at the smallness of my list, but I can only speak of what has struck me. There is a multitude of varieties, all very beautiful, and from them selections may be of course made; and indeed in each locality there are favourite flowers which are said to eclipse others. My list is given from several localities.—D., Deal.

JUDGING GRAPES—TRANSPLANTING AND ROOT-PRUNING—APPLE STOCKS.

I quite agree with Mr. Thomson in what he lays down as a standard for judging Grapes. To my mind there is nothing more pleasing than to have a dish of well "finished" black Grapes to send to table—I mean finished in bunch, in berry, in colour, in bloom, and in flavour. I am quite of opinion that Grapes sent for competition ought to be tasted. I do not or one moment entertain the idea that an employer who desires to see horticultural exhibitions succeed would object to have his Grapes tasted; besides, the men who are chosen to be judges are men who are selected for their ability, and know full well how to handle a bunch of Grapes without disfiguring it. I would not under any circumstances have red Hamburg Grapes called black; if they are not so, let them have a class to themselves, but do not let us call them black when they are red. I know of nothing more disheartening to a Grape-grower, when he has used his best endeavours and his employer's means for the purpose of obtaining black Grapes, than to find that they will be red in spite of him.

At page 151 information is solicited respecting transplanting and root-pruning. When I have any transplanting to do I choose the last week in October, weather permitting, and by the middle of November I like to have all trees planted or removed if possible. I believe that root-action is very active in fruit trees at that season. As a case in point I may state

that some years ago I received a package of fruit trees from the nursery in the first week in November; they could not all be planted for a few days, and, therefore, they were carefully laid in, and in four days they had sent out numbers of fine white fibres, in search of food no doubt.

Great care is necessary in transplanting and root-pruning, otherwise much mischief may be done; for my part I like to see the leaves put on their autumnal tint before I commence operations. Local circumstances must also be taken into consideration. I have seen much mischief follow root-pruning when the operation has been injudiciously performed. For instance, I once root-pruned some Pear trees on the walls, on espaliers, and others—such as Glou Morceau, Althorp Crasanne, Louise Bonue, Marie Louise, and many more, some on the Quince, and these are the easiest to manage with, and some on the Pear, which require more care. Those on the Pear were very unfruitful, and had but few roots, and most of them tap roots; of course these I cut out. I examined a part of the other roots, and gave them a little fresh soil. In the spring, I found the trees so treated had received a very severe check, and it was two years before they looked well again. In the third year I was rewarded with a splendid crop of well-ripened fruit from the once-barren trees. There need be no hesitation about root-pruning, but it requires care and thought. To those who have to learn the practice I would say, Root-prune only a few trees in a season; by this means you can operate upon them in rotation. Some kinds are best root-pruned at twice.

As to stocks for Pear trees, I prefer the Pear stock to the Quince for garden and orchard trees, and the Quince for some kinds in pots. All do not do alike. The Pear stock, regularly transplanted, produces abundance of fibrous roots. Why I object to the Quince is that sometimes at the junction of the bud or graft the trees become unsightly from the stock not keeping pace with the bud; sometimes they die off altogether. I would strongly advise those who have to learn to procure Mr. Rivers's "Miniature Fruit Garden," and study it; all that is needed is there.

We last November moved an Apricot and Peach tree of about six years' growth; they have both ripened an excellent crop of fine fruit this season, and are very promising for the next. Of course they have been carefully attended to as regards watering and syringing. I am inclined to think that the cause of so much fruit falling, of which there are such numerous complaints at times, is in a great measure the want of moisture at the root when the fruit is stoning. Perhaps some of your readers can help us in this matter.

At page 194 Mr. W. Paul details some good information respecting the Doucin stock for Apples. The old Burr Knot Apple answers well for stocks for some kinds of Apples, especially where small trees are desired. It strikes freely from cuttings.—M. H., Acklam Hall.

TOMATOES IN AN UNFAVOURABLE SEASON.

A fine bright summer or the reverse has so much influence in causing the success or failure of many crops under the gardener's care, that it is no wonder his anxiety is great when an adverse season threatens to prevent his supplying all the articles of produce which he is expected to furnish. A wet cold autumn, with an early winter, is fatal in many cases to the ripening of Tomatoes out of doors; even in favoured places they are less abundant, if they ripen at all, which is not always the case in very cold seasons. At the same time there are plants for which the benefits of a fine autumn come too late. Onions like bright hot weather, but their growth, and ripening, and even harvesting and storing, ought to be done before the middle of September; so that, unless they have fine weather in June and the early part of July, they do not benefit much by that which may come later. But this is not the case with out-door Grapes, Tomatoes, and some other things which require a long summer and fine weather at the end of it.

I believe that after the present season has passed away it will be looked upon as being only an indifferent one in its action on fruits and tender plants, for there will be few out-door Grapes that will ripen, and Tomatoes threaten also to be late and anything but plentiful. I recollect one fine season (I think it was 1858), when some plants of Tomatoes that by accident came up on a north border from self-sown seed were allowed to remain, and a few boughs were laid on the ground, on which the tops rested, and bore finely ripened fruit in abundance;

although I believe the plants did not make their appearance aboveground until the middle of May, when other plants of the same kind were being planted out in favoured places against walls, &c.; but the season proving unusually warm occasioned the plants from self-sown seeds to ripen fruit also. A hot dry season will also ripen, or in a great measure do so, Capsicums growing out-doors, and its effects are also visible on some plants hardier than our commonest weeds. Jerusalem Artichokes will flower in dry fine autumns, and Indian Corn will likewise ripen better than when the season is unfavourable. It is not only in the production of flowers and fruit that a hot sunny summer has marked effects, but the growth of plants from warmer climates than our own is accelerated accordingly. The warm seasons of 1857, 1858, and 1859 led many to form great expectations of *Holcus saccharatus* as a forage plant for cattle; but the next year upset all their speculations, other subjects being similarly affected. Now, although the summer of 1867 has been more favourable than that of 1860, there are nevertheless many tender plants that have made but little progress out of doors, and amongst them Tomatoes; and although autumn is only just commenced, nevertheless the moisture in the earth will prevent the ground receiving that warmth so necessary to ripen a fruit that requires all the heat of our hottest seasons. It is, however, good practice to stop the shoots, to cut away all useless wood, and allow the fruit to have all the exposure it can; and further than that, it is advisable to run a spade down a short distance from the collar of the plant all round, so as to cut the points of the roots, and thereby check all attempts at mere growth of wood. These remedies, with a slight covering when a sharp frost is expected, will help the plant to live on until the fruit is more matured; but it can hardly be expected that fruit thus starved into a resemblance of ripeness can be so good as that which ripens earlier in the season and under more natural conditions. By adopting these means, however, its quality is better than would otherwise be the case; and as Tomatoes have all to undergo a cooking or preserving process before being brought to table, and receive additions in the shape of seasonings, &c., their immature condition is not of so much consequence as with dessert fruits.

My object in making the foregoing remarks is chiefly to direct attention to the fact that it is impossible to have Tomatoes and similar crops in such abundance in dull seasons as in those which are hot; and although in favoured situations a crop may at all times be looked forward to with every prospect of success, even then the difference of seasons is as perceptible as in less favoured localities, which are far more numerous.

—J. ROBINSON.

CULTURE OF BEDDING CALCEOLARIAS.

"ROBIN ROVE" seems to me to infer that a robust and vigorous growth is a remedy for canker in the *Calceolaria*. I cannot say that I have not found it so in practice. Although the plants under my care have in years past suffered but little from its ravages, and have quite escaped it this season, yet whenever it has made its appearance strong plants, apparently rejoicing in an exuberance of health, and certainly of fine green foliage and large trusses of bloom, have succumbed to it in quite as large numbers as the weaker plants.

"ROBIN ROVE" advocates pot culture. I must say that for bedding purposes I very much prefer a *Calceolaria* which has never been in a pot at all. It is a good old saying, that "Necessity is the mother of invention;" and having to provide a large stock of bedding plants with a small quantity of glass to winter them in, caused me to try to grow *Calceolarias* without pots, and also without heat. I do not advance any claim to originality for my plan, as I know it is practised in many gardens, if not just as I state, yet in a manner so nearly approaching it that the difference is quite immaterial.

The cuttings are taken off about the last week in September (and here I must say that I quite agree with "ROBIN ROVE" in his preference for autumn-struck cuttings); they are inserted firmly in soil consisting of equal parts of leaf mould and sand, in a cold brick pit, near the glass, and every attention is paid to giving plenty of air and water, never suffering them to flag at all, or to present that starved and dwindling appearance which they will do if at all badly treated. They are well protected during winter with mats and dry litter, and the lights are taken off whenever the weather permits; and although I have had them covered nearly a fortnight at a time, yet upon opening the lights I have never known them look much the worse in consequence of being so confined.

Treated in the above manner the plants will grow so freely as to require stopping twice or thrice before their removal, early in March. At that time of the year I am unable to spare any boxes or hand-lights, I, therefore, adopt the following plan:—A bed or pit is prepared for the plants on a warm border in this way: the soil is taken out to the depth of 15 inches, the sides are made sloping, and are faced with flat tiles or slates to prevent the soil from falling in on the plants; 8 inches of soil consisting of two parts leaf soil, one part loam, and one part sand, being then put in, and if this is somewhat rough so much the better. The plants are then taken up carefully, removed from the brick pit, in which, by this time, they have become very much crowded, and are planted far enough apart to allow of a liberal growth. They are protected during the night, and on cold mornings by hurdles thatched with straw, and care is taken for the first week to shelter them from cold winds. They soon become established, growing freely, and requiring to be stopped several times before they are removed to the flower-beds. By the time they are wanted for this purpose they will have become such fine, bushy, vigorous plants, as I venture to say are rarely, if ever, to be equalled by plants grown in pots. I also think that plants having such a mass of fine healthy roots as these will have when taken to the flower garden, must possess a great advantage over a plant which has become even slightly pot-bound.—EDWARD LUCKENST, Gardener to Mrs. Simcox, Egerton House, Egerton, Kent.

I ONCE heard a head gardener of no little pretensions say to his foreman, "It is now time to begin propagating our stock of bedding plants for next season; and as the *Calceolarias* take a long time to strike, you had better put in cuttings of them before the *Verbenas*." I need hardly remark that the cuttings did take a long time to strike, when I state that they were taken off at the end of August, at which time the plants were in full flower, and when, consequently, all their energies were directed to the production of flowers, whilst excessive evaporation from the leaves was going on under the influence of sun and drying winds. Probably at that season the plants were also dry at the root, which would tend to dry up the sap in the shoots, and destroy the tissue of the leaves, thus preventing the plants from forming the organisable matter necessary for the production of roots.

Well, the cuttings were put in according to the gardener's directions in small 32's, from fifteen to eighteen cuttings being inserted in each pot, and the pots placed in a pit. September passed, and no signs of rooting. "Keep them drier," was the order, which made bad worse. The following three months passed, and only one or two cuttings in each pot struck, whilst many more had perished altogether. This was a failure from which I learned much, and, although then a lad, it taught me a lesson which it will take me a lifetime to forget.

I will now describe the plan which I have adopted for several years with great success in propagating and wintering *Calceolarias*.

Any time in September I collect a lot of old leaves, half-decayed dung, refuse from the kitchen garden, &c. I then measure the width and length of my frame or frames, and make my bed 2 feet thick and 2 feet wider and longer than my frame, using the material I have collected more for drainage and keeping the necessary moisture at the roots than for bottom heat, which is unnecessary. On the centre of the bed I then place my frame, and in it I put about 6 inches of moderately rich open soil, and, after levelling this, I place a little sand or grit over it; I then give a slight watering to settle the sand, and the bed is quite fit for the reception of the cuttings.

The cuttings are taken when the plants are growing most rapidly in the autumn, which is when nearly all the flowers are off, and when refreshed by the September rains and dews. I take off my cuttings below the third joint from the point, leaving the point and one pair of fully developed leaves on the cutting. After I have made a few I insert them in lines across the frame at about 2½ inches asunder. I then give a gentle watering through a fine rose, and keep the frame closed. The after-treatment consists in keeping them sprinkled twice a day, and giving them a little shading on sunny mornings.

When all the cuttings are struck, I give a little air, and afterwards gradually inure them to the air, so as to make them as hardy as possible before winter, by removing the lights altogether on every favourable opportunity. By this mode of treatment they are enabled to withstand several degrees of frost with impunity.

During winter I pack leaves, dry Fern, or straw around the

frame, and in severe weather place a covering of mats on the glass, leaving one mat on to shade from sun when there is any danger of frost being inside.

By pursuing the above mode of treatment I have never had a plant affected with yellowness, as described by your correspondent at page 189. Doubtless his plan is very good where plants are calculated by so many dozens; but where as many thousands are wanted, I fear the pot system would take up the room required for other plants which are more impatient of moisture and frost.

The winter over, air is given more freely, and every day as the sun gains greater power; and when April with its genial showers has come, the plants are growing rapidly. I now take them from their winter quarters, and plant them out in turf-pits or frames, about 4 inches asunder, in good soil. I keep them close for a day or two until they take hold of the new soil. I never allow them to flag or become dry, and stop at every second joint, so that in May I have fine sturdy plants, which are removed to their summer quarters with a good ball of soil about them.

If the above treatment were carried out, we should not hear so many complaints of *Calceolaria* failures.—W. OSBORNE, *Co. Cork*.

MARÉCHAL NIEL ROSE.

MUCH dissatisfaction has been expressed, and still more felt, at the very unfavourable results obtained by the numerous cultivators of this variety of yellow Rose. On the other hand, there are many who have been more successful, and who are, therefore, not without reason ready to affirm that the causes of discontent are groundless. This has till lately been inexplicable.

When this Rose was first announced in the glowing and rather exaggerated way in which the French growers are accustomed to put forth their novelties, hopes were entertained that it might prove a really valuable addition to our yellow Roses, a colour so very popular with us among Roses, as much, perhaps, from the very distinct character it adds to the exhibition-stand and to the bouquet, as from its own peculiar merits combined with form, as seen in *Triomphe de Rennes* and *Céline Forestier*. But when the first glorious blooms of it were seen, as exhibited by Mr. Mitchell, Messrs. Paul & Son, Mr. Keynes, and others, it was received with admiration, such as has never before been accorded to any single Rose. As a matter of course, not only rosarians and Rose growers, but the horticultural world generally, were in a fever of anxiety to possess it, and the propagation of it was, and is still, an important business with nurserymen. Thousands of plants have been distributed, and pleasure and disappointment have both followed.

The *Maréchal Niel* is really a very beautiful yellow Rose, now so well known as not to need description; nevertheless, to the Rose critic it has a slight defect in form which a thorough-going rosarian must acknowledge, and hope that before long another kind will appear that will yield symmetry of shape with the glorious colour of the *Maréchal*. Whence have arisen the discrepancies that now perplex the possessors of this fine Rose? It has for some time been suspected that there are in commerce two Roses under the name of *Maréchal Niel*; and comparison of plants, or even foliage, leaves no doubt, but even leads to conviction, that there are really two different Roses that have been sent out under this name, and that difference in results arises from this fact. Nor is it in England alone that these circumstances have been noted, for I hear that in France disappointments on the one hand, and favourable accounts on the other, have also been expressed; and there also it is asserted that there are two *Maréchal Niels* in commerce. It is furthermore accounted for in this way. I give the statement as I received it, without being able to vouch for its correctness further than that it came from an authority who would not give it currency without sufficient foundation.

Maréchal Niel Rose was raised by a young gardener named Pradel, somewhere in the south of France. M. Eugène Verdier, of Paris, became the possessor of the stock, or original plant. It is said that Pradel sent to M. Verdier two seedlings without distinguishing them. In the belief that both of these plants were of the same kind, propagation was proceeded with from them indiscriminately; hence arose the confusion, for which M. Verdier is responsible, if not to blame. Be it as it may, great annoyance has been felt, and it is but due to the public that some explanation should be offered to clear away the uncertainty at present existing. Should this statement be even

an approximation to the truth, it will be quite evident that our nurserymen are quite free from any blame attached to the distribution of the wrong kind. It will also be remembered that the manner in which *Maréchal Niel* was first sent out was not altogether unobjectionable.

The pseudo *Maréchal Niel* may be distinguished from the true one by its habit, foliage, and flowers. The habit is less robust and more straggling; the foliage of a deeper green, resembling that of *Isabella Gray*; the leaves smaller and more pointed; the flowers are smaller, hard in opening, but when open of a deeper yellow, but in no point so good as the right variety.—ADOLPHUS H. KENT.

MR. F. FLITTON in a recent number characterises *Maréchal Niel* as "a very very shy bloomer, and a bad opener." I have only possessed it two seasons, and must say that I cannot endorse his opinion. My plant, which is quite small, and producing very few shoots, last year showed bloom almost simultaneously with the first leaf-growth, and this year a bud inserted in 1866 on the common Pink China stock, began to grow most vigorously, and exhibited seven or eight buds as soon as it was as many inches long. These opened as well as any Rose in my cultivation. The testimony of other growers in this neighbourhood coincides with mine.—J. N. M. S.

PIGMY VINES.

As I have lately had a number of letters inquiring about the culture of Vines alluded to in your Journal of September 5th by "J. S." (page 171), I shall feel obliged by your permitting me to state generally in reply to their inquiries that the "pigmy Vines" alluded to were all cuttings from Vines that had been started in February last. The cuttings were taken off the old Vines after the fruit was all set, and were potted in five, six, and seven-inch pots.—WILLIAM HENDERSON.

PROLONGED HORTICULTURAL EXHIBITIONS.

I REG to enter a protest against the custom of continuing horticultural exhibitions for four or five days, or a week, as is fast becoming the rule at provincial as well as metropolitan shows. I speak chiefly with regard to fruit, although I have no doubt the same objections apply to plants. Looking at the extra expenses incurred, the loss of time, the value of the prizes awarded, and, above all, the damage to fruit by long exposure and the like, there is really little or no inducement to venture to the exhibition table. True, there is the honour and gratification of receiving a prize; but, then, what a counterbalance is there in the care, anxiety, and expense of conveying a large quantity of valuable fruit a distance, perhaps, of eighty or one hundred miles and back.

It is, I believe, generally understood, between gardeners and their employers, that the gardener pays all expenses and reaps any benefit which may be gained; and it is also reasonably expected that the fruit will be brought back again in as good condition as possible. Indeed, I have known cases where permission to exhibit was accorded only on these conditions—conditions, I may observe, upon which it is hardly necessary to insist, for it is the interest of the gardener in every respect to lay his very best samples upon his employer's table, and when he ventures with the pick of his produce to the exhibition table, it is important for him that it is taken care of. I have not a word to say against curators or others in charge at our exhibitions, for, in general, everything is conducted in a satisfactory manner in this respect. It is the damage arising from exposure, whereby the fruit is rendered unfit for almost any purpose whatever, to which I allude. As an exhibitor and observer, I can speak with confidence, and instances need not be wanting. To an exhibition which lasted the best part of a week, the writer of these remarks sent five bunches of Grapes, weighing together 23 lbs., also Peaches, Pines, Melons, Figs, &c. On the last day of the exhibition a man was sent to bring the fruit back—but in what condition? Figs were mouldy, and fit only for the rubbish-heap; the slightest bruise which the Peaches had sustained was now an ugly blemish; Melons felt so spongy, and smelt so decidedly, that their appearance at dessert was considered risky, and they followed the Figs; and the Grapes, which I contemplated sending to dessert with such satisfaction, and which I cut with such grave misgivings on the morning of the show, were now all flaccid, the footstalks

withered, and in an ugly heap. A select company was expected to dine at the Hall, and to send them to dessert to be criticised in such a condition was out of the question. So, gulping down the mortification and disappointment as best I could, I had recourse to the cook, to whom I hinted that if anything was wanted in that way I would be glad to oblige him; but that functionary, whose demands for such things seem generally to fall between Christmas and Easter, did not "just want" anything of the sort then, so I kept them on, and I should be sorry to say what became of them. Again, my friend A—— sent seven or eight of his best bunches, or something over 40 lbs. weight. In the hope of picking up a "wrinkle," I asked him afterwards how he disposed of them. He muttered something about a "cricket match," and about being "eaten up," but the subject was evidently so annoying that I desisted.

I mention these instances merely to show the peculiar circumstances in which an exhibitor may be, and often is placed, not at all to his advantage, or that of his employer. Every exhibitor knows that many of the samples he sees upon the exhibition table may have been retarded for days, or even weeks before the show, and are not likely to be of much use after another week's exposure in such a place.

I have felt surprised at times that some of the above objections have never presented themselves to the minds of those who object so loudly to their Grapes being "mutilated and pulled about by the judges," as they like to put it. I have seldom or never seen a bunch of Grapes so abused in that way as to be unrepresentable afterwards, as, indeed, I should consider the man unfit to act in the capacity of judge who could suppose that two, or even half a dozen berries could not be picked off a bunch of Grapes without injury to its appearance afterwards. I am certain, at any rate, that the injury done in this way is a mere trifle in comparison to that sustained by fruit being exposed for a week in a marquee; and I will observe, in conclusion, that I think two days quite sufficient, for fruit at least; and if the prizes are expected to be an inducement to exhibitors, they ought to be in some proportion to the trouble and expenses incurred. Were it not for obvious reasons, I could give half a score of instances which have come to my own knowledge, where gardeners have been prevented partially or altogether from exhibiting, solely from the reasons I have stated. —AN EXHIBITOR.

ROYAL HORTICULTURAL SOCIETY.

In the report made last week of the Zonal Pelargoniums we inadvertently omitted to notice a very fine variety sent by Mr. J. Must, Walthamstow, which received a first-class certificate. It was named Queen of Roses, and is decidedly the very best in its section, having a good truss, great depth of colour, and firmness of petal, far surpassing Beauté du Suresnes and others of the same class. Should it be a free bloomer and of good habit, it will be a great acquisition.

THE ELDER TREE.

THE common Elder (*Sambucus nigra*), is so decidedly a household plant that any attempt to describe it would be useless. Its name *Sambucus* is said to be derived from *Sambuca*, a musical instrument made of it. I can well believe this; for, in my boyhood days, its hollow stems were the unconverted timber out of which our whistles and pop-guns were made. The wood of the Elder is very hard, and so like that of the Box that foot-rules are made of it. In Scotland, it is called Bower tree, pronounced "Boortree," as in the old ballad:—

"What care I for owl's cry,
For Boortree banks, or walls of Craigie?"

but in the Scottish ballad of the courtship of that doughty wight the "Laird of Cockpen," we find the name of Elder:—

"Lady Jane she was making the Elder flower wine."

I have tasted the Elder-flower wine, but can say very little in its favour; but Elder-berry wine is certainly a very agreeable beverage when warmed and spiced. The Elder is a rapid grower at first, and survives for a long time as a stunted bush or low tree, with a thick shady top; and, being a free-flowering plant, it is generally covered with blossom in summer, and heavily laden with berries in autumn. It is a coarse feeder, and thrives best where there is plenty of moisture; indeed, such a plant must have a good supply of raw materials at hand, as it will rush into such a rapidity of growth as is scarcely known among woody plants, frequently producing a crop of strong shoots 6 feet long in a season, when once it gets estab-

lished; and it does not take a long time to get that; only let it be planted in season-time—November, December, or January, not later—and no failure need be apprehended. When the Elder begins to grow, if one did not know its character and history, it would easily be taken for an herbaceous plant; and its stinking foliage and blackish green colour would father it upon the worst form of Umbellifera, and, if not poisonous, at least so ill-favoured and uninviting, that no one could think of eating any part of such a plant, unless he had sound information beforehand on the subject. But although the Elder has the lurid poisonous look and the hollow stem of the Hemlock-brood, it is not an umbelliferous plant, but belongs to the Honeysuckle tribe (*Caprifoliaceae*), and, although its stem be hollow, it is, after all, both woody and perennial, forming one of those marvellous links which we frequently find in botany, uniting opposite characters. Had the Elder been blest with foliage as sweet as that of the Walnut tree, it would not have been half so valuable to the farmer; for it is very rarely indeed that you see the Elder tree touched by hares or rabbits. During long and severe frosts, with snow, I have seen sticks of all kinds bitten, and branches that had been cut off where trees had been felled would be barked as clean as if the woodman had stripped them for the tanner. But, as a rule, hares and rabbits do not bark the Elder: and as for the leaves, the smell is quite sufficient to warn either cattle or coney from laying a tooth upon them.

This style of plant is called by planters a "nurse," and they put in such by millions to shelter better trees.

Since the system of bedding-out greenhouse plants for the flower garden in summer became a common practice, everybody has become aware that such plants as the Pelargonium and the Verbena are increased by cuttings of the green wood with more or less of the leaves attached. Now, although the Elder is to be increased by cuttings, it being a deciduous tree it is not to be treated in this manner, and it is not to be propagated in summer, or when growing, as is the case with Pelargoniums, &c. The Elder, the Willow, the Gooseberry, and the Vine, are mostly propagated by truncheons of the stem of the wood of the current year, taken off the parent plant when the sap is down, or when the leaves have fallen and the plant is in a dormant state. The truncheons of the Elder may be 1 or 2 feet long, and ought to have one joint in the earth when planted, and one or more out; the truncheons should be cut below a joint with a clean cross-cut, not slanting; the truncheons to be planted at once where they are to remain, and should be not less than 4½ inches deep in the ground, firmly planted in finely pulverised soil. It may not be desirable, for many reasons, to purchase costly trees, and plant them at one's own expense upon other people's land, and yet the use and shelter of trees must be had; for stone walls, even if these could be had, are not to compare with trees in breaking the force of wind, for the walls produce eddies and often whirl the wind with great violence against particular points, but trees sift the wind and never gather it. A farm-steading unsheltered by trees ought to be a terror to an incoming tenant, as it ever will be to those who have to do battle with the storm in such a place thus miserably left to its mercy. When our ports and harbours were swept by wind and tide, the breakers seriously interfered with our shipping interests, and we had to erect costly breakwaters, behind which the stately craft could ride at anchor unmolested by the storm. This was sterling wisdom and forethought, well founded upon dearly-bought experience; therefore let no one think lightly of masses of cheaply got trees to adorn the landscape and shelter man and beast. But I have another object in view with branches of trees on the farm, for faggot wood is calculated to do a species of work that no other material can do so well. In the kindling of fires, the heating of bread ovens, and in various other ways, the faggot stack is essential to the work; but on a clay farm the faggot wood, in immense bulk, is particularly wanted to burn the clay with—for there is no other process at all to compare with burning to bring the clay into good working order, for it is chemically changed as well as mechanically when it has passed through the fire; and for want of fuel of the right kind it never could be done. It is only such materials as stubble and straw of all kinds, and particularly Bean straw, and wood faggots, that farmers can use in burning clay, for coal, however cheap, is no fuel for farmers to burn ridges of wet clay with.

There are only two ways in which Elder trees appear to me to be in character, and these are circles and lines. No figure equals the circle, for it has the same front on all sides, and the general appearance is that of one vast bush. It is no waste of land to sacrifice so much for the sake of shelter.

Planted in lines as hedgerows, the Elder will be quite established in two years, and form a fence; planted against a low stone wall, hurdles, pales, &c., it forms an excellent fence by adding one storey to make up for the deficiency of the wall; and as it never grows large, it does not rob the land like timber trees. I remember a hedge made of Elder shoots to screen a garden; it was about 100 feet long, and one man cut the shoots from the bushes, carried them on his back for half-a-mile, cut them into lengths, and planted them, without any further cost than his own labour, and that was for half-a-day! Cottagers and tenants-at-will should take a lesson from this experiment, for it was a tall, strong hedge in two years, and such a wind-guard would be no small benefit to those who rear calves and poultry, and, if they made no use of the Elder berries, the fowls would eat them greedily.—ALEX. FORSYTH (in *Mark Lane Express*.)

LILLIESDEN.

SITUATED on an eminence in a rich undulated tract of country near the southern boundary of Kent is the village of Hawkhurst, the healthiness and rural beauty of which have obtained for it a high reputation. The village in itself is a pattern of neatness, not less so by its situation than by the uniformity of colouring given to the shops and dwellings, that employed being a sort of stone colour. Hawkhurst appears to consist of two villages fully half a mile apart, each built on an eminence, with a valley between. The southern of the two I shall call for distinction Hawkhurst proper, as it contains the parish church, itself an object of much beauty, and also that other important feature in a country village—the green, which in this case is no mere piece of waste ground used for piling up heaps of manure, timber, and the various articles we sometimes meet with in other open spaces dignified with the same name, but is a beautiful level piece of turf that would grace any nobleman's lawn, and sufficiently large for two or three sets of cricketers at a time; and it is to be hoped the spot will always remain innocent of the bricks and mortar which invade similar public places. Good roads surround this triangular-shaped green, bordered by dwellings and shops. The church and its interesting churchyard are at one corner, and near to the gate stands a venerable Oak tree, which, though not so large as some met with elsewhere, is yet, I believe, about 17 feet in circumference at 4 feet from the ground, and from its aged appearance is a great favourite with artists. The churchyard itself is also full of interest, and commands a lovely landscape. Preceding beneath umbrageous trees, and passing on the way an elevated structure, which is the observatory of the great Sir John Herschel, I at length came to the immediate object of my journey—Lilliesden.

Lilliesden, the seat of Colonel Lloyd, is one of those residences which rise so suddenly and yet so complete, at the bidding of such energetic and enterprising gentlemen as the owner of this. I believe only a dozen years have elapsed since the property passed into his hands; it was then but an ordinary farm with its necessary buildings and a second-class farmhouse. The latter have all been swept away, and a new mansion has been erected, which is replete with every comfort which wealth, good taste, and judicious arrangement can ensure. So successful, also, has been the planting of large trees, that Lime trees and Oaks 40 feet high already grace the lawn and belts where only a bare hill existed before, while in front of these have been planted, in most cases successfully, specimens of the most choice Pinuses brought from great distances; numbers of smaller ones are also rising up in all quarters, as well as masses of shrubs, in one place crowning a height, in another reposing in a valley. Here I may remark that the mansion is placed on the top of one of the gentle eminences which form so important a feature in the district; while around it on the southern and western sides the ground recedes, not regularly, but in subsidiary hills and valleys, giving scope for that irregular mode of planting and treatment which has always been a favourite feature in English gardening.

On the southern and western sides of the mansion is a broad terrace; and below that, on the southern side, is a geometric garden, the beds being cut out on grass, and these at the time of my visit—the early part of September, were gay with the most choice bedding plants. Conspicuous amongst them was Indian Yellow, one of the Pelargoniums raised by Mr. Beaton, and which is an abundant bloomer. Mrs. Pollock was also well represented, and, indeed, all sections of Pelargoniums and other bedding plants, not the least interesting to me being

some beds of *Calceolaria Aurea floribunda* entirely free from disease and dead or half-dead plants.

Below this geometric garden the ground was covered with irregular groups of Pinuses and shrubs, with ample glades of well-shaven lawn between, the whole being intersected with walks so arranged as not to mar the character of repose which reigned in the planting. To the westward the masses of shrubs were more dense and the declivity more steep, though at the same time broken and irregular; while at the bottom a piece of water stretched for a considerable distance, forming in that direction the boundary between the dressed grounds and the park, which, I ought to add, was formed in the same short space of time as the mansion and garden, and yet it seemed complete. By reticising trees which existed in suitable places, planting others where wanted, levelling ground, and removing hedgerows and other obstacles, with the aid of a healthy sward which sprung up, it had the appearance of a park formed some centuries ago.

Connected with the mansion at the south-eastern corner is a conservatory 72 feet long by about 30 feet wide, but as it was undergoing alterations at the time I was there, the plants that usually adorn it were in a suitable span-roofed house in the garden. The mansion itself is one of those to which a mixture of red brick and Bath stone gives a showy appearance. The approach to it is on the north side; and by the side of the carriage road some noble specimens of *Cupressus macrocarpa*, *Wellingtonia*, *Pinus Douglasii*, and other favourites were planted; while in another part of the ground the same and other kinds of trees were to be met with in numbers, and now and then that very important ornament to our lawns in autumn, the Pampas Grass. On one plant upwards of one hundred spikes of bloom were making their appearance, giving unmistakable evidence that the severe January frost, so destructive at many places, had not done much harm at Lilliesden.

Connected with the pleasure ground and lawn on the north-western side is the kitchen garden, which has the advantage of being situated on ground which is level, or nearly so. Quarters of healthy vegetables attested that they had been generously dealt with, and under judicious management the wall trees were yielding abundant crops. Perhaps, if anything was wanting to give this garden more importance, it was a greater height in the walls.

Passing on to the plot where the glass houses are arranged, I found that these consisted of several houses and pits, but having been erected at various times, and the original intention of only a moderate number having been departed from, the additions found necessary have consequently given a less uniform character to the whole than would have been the case had a proper plan been decided on at first. The contents of the houses and pits, however, were in all cases good. There were excellent Grapes in one, in another the fruit which had been cut was equally good, while a third presented a good prospect for winter supply. In one of the houses I observed fruit of the variety known as Marchioness of Hastings, with white berries much like Golden Hamburgh, and in excellent order, while a late black variety seemed equally well grown. Mr. Record had received it for Lady Downe's, but it was certainly not that variety, but one midway between the Alicante and West's St. Peter's, as it in some degree resembled both; still, as localities alter the character of Grapes, it may probably be referable to some well-known kind. The Black Hamburgh and Mill Hill Hamburgh were both represented, and the health of each attested the care bestowed on them by those entrusted with their management. In another house devoted to early forcing was an excellent crop of Melons ripening off, also a number of plants of Queen Anne's Pocket Melon, upon which when again brought into notice Mr. Record was one of the first to report in this Journal; an inner compartment, that might be kept still warmer if required, contained some young plants of Cucumbers turned out ready for fruiting in midwinter. A large span-roofed house was gay with plants intended for the conservatory, amongst which were some well-grown Fuchsias of the best kinds, of which I noticed Gipsy Girl, Conspicua, Schiller, Guiding Star, Lady Heytesbury, and Albertii, as being particularly good, or well-grown. *Lilium*, *Tritonia aurea*, and other plants, were equally abundant; and not the least interesting were some plants of Tree Mignonette nearly 5 feet high, in good health and flower. Outside this house there was a fine lot of Camellias, Azaleas, and other plants for winter and spring use. A stove contained specimens of the most remarkable flowering and fine-foliaged plants; and several pits, more or less occupied by the crops of the season, formed another feature

of the whole, also allowing standing room for a batch of excellent Strawberry plants, of which Mr. Record prepares upwards of a thousand for forcing.

In proximity to the glass houses are the rooms for the young men employed in the garden, and, contrary to a too common practice, these were not built against the north wall at the back of hothouses or a kitchen garden, but stood out openly by themselves, and a peep in at the window showed that internal comfort as well as outward appearance was combined; and the convenient position in which they were placed for giving air and other attendance to the glass structures, showed a judicious arrangement on the part of the garden architect.

In the borders skirting the kitchen garden I noticed numbers of plants being prepared for the spring decoration of the flower garden. An early-flowering *Silene*, Wallflowers in thousands, *Myosotis sylvatica*, some *Violas*, several early-flowering shrubs, as *Deutzias*, *Weigelas*, &c., with bulbs of various kinds, I understood, formed only a part of these, of which I hope Mr. Record will favour us with a more detailed account, as spring gardening is as yet but in its infancy, and those who practise it differ widely in respect to the materials employed.

In noticing the terrace garden near the mansion, I omitted to describe a number of standard *Laurostinnus* in slate boxes with ornamental rims. These standards, of which the heads were round and conical, a plant trained in each form being placed alternately, were in boxes set on square dressed stones, which I was told were placed over pits walled up, and sufficiently large to take in the box up to its rim in winter, when the plants were lowered into the pit and the roots covered with cocoa-nut fibre, the top presenting the same appearance as in summer, with only a shorter stem, while the roots were safe from all injury from frost. I can confidently recommend this plan to all having such plants to deal with, and the healthy condition of those at Lilliesden was a proof of its success.

In concluding my remarks, it is only just to pay a high compliment to its spirited proprietor, whose measures in securing himself and family a comfortable abode are not less noteworthy than his spirit in forwarding everything that is calculated to benefit his poorer neighbours. Comfortable and commodious cottages attest his benevolence. The future annals of the county will include the name of Lilliesden amongst its mansions deserving that especial notice which a large and handsome dwelling surrounded by twenty or more acres of dressed grounds, is usually entitled to.—J. Rouson.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Broccoli, give every attention to the autumn sorts; also to autumn and winter *Lettuces*, as to watering with liquid manure to make them crisp, and tying in regular succession. *Celery*, let the blanching of this and *Endive* be proceeded with. *Lettuce*, *Brown* and *Bath Cos*, as well as *Hammer-smith Cabbage*, for early spring work, should now be pricked out. *Onions*, store; also *Potatoes* and other roots as they become ripe. *Spinach*, hoe and thin, and dust soot lightly between the rows in showery weather, as also among *Turnips* and similar crops. *Tomatoes*, cut off all superfluous shoots, and if the plants are gross, chop away a portion of their roots.

FRUIT GARDEN.

Put the fruit-room in proper order for the reception of its winter stock. Use no straw or hay about the fruit, as materials of the kind are very liable to spoil the flavour of the fruit laid amongst them. Keep the room always cool, dry, and airy in dry weather; handle the fruit, especially *Pears*, as little and as lightly as possible. Remove all decaying fruit as soon as noticed. Protect all fruits from wasps and other enemies. Thin the leaves of early *Cherry* trees on walls, so as to ripen the wood. Protect ripening *Figs* with gauze bags; remove decaying leaves from *Peaches* and *Nectarines* to expose and ripen the wood; protect the late fruit; gather *Pears* as they ripen, and lay them in single tiers on the fruit-shelves. Protect *Plums* from insects, and closely net-up *Impatiens* and other keeping varieties. Expose *Raspberry* suckers so as to ripen them thoroughly. Thin a few leaves from *Vines* to assist in ripening the fruit and wood.

FLOWER GARDEN.

Take up and pot such of the greenhouse and half-hardy plants from the borders and beds as may be desirable. Pot the layers of *Carnations* and *Picotees*. Tie-up and regulate the

Dahlias as they bloom, removing all bad and small flowers. Prepare beds for *Tulips* and other bulbs. The soil should be well worked and exposed to the air, and about a third of the old soil replaced with good fresh loam. Chinese and similar Roses may be struck from cuttings, also prune-in the straggling boughs. Where annuals have sown themselves on borders, it is advisable that a great portion of them be carefully retained, they will bloom early and strong in the spring, especially the Californian kinds, and may, moreover, be transplanted in February to desirable situations. Lawns should now be well attended to, in regard to mowing, rolling, &c. *Helianthus*, *Phloxes*, &c., should once more be examined as regards securing before October commences.

GREENHOUSE AND CONSERVATORY.

Continue to weed out in the conservatory flowers of a temporary character on the eve of decay, and to supply their places with good specimens of other plants. The introduction, however, of some of the hardwooded tribes which have been set out of doors (unless they can be placed in temporary situations for awhile), will fill many of these vacancies. Every attention having been paid to autumnal and winter *Roses*, as recommended in former calendars, they will now be found very useful both in this and other ornamental structures. They should be at this period thoroughly established in their pots, and all attempts at blossoming having been duly checked for months past, they will now be compact plants, full of vigour, and inclined to blossom. Much of the business pertaining to the conservatory will be found to apply to the mixed greenhouse. In housing the out-door plants be sure to place the *Pelargoniums* and forward *Cinerarias* where they will enjoy both light and air, and near the glass if possible. Hardwooded plants may be allowed to stand further back, except the young stock of *Ericas*, *Euphorbias*, and similar choice plants—these will deserve a good situation. The Chinese *Primroses* will do in partial shade, and in the dampest part of the house. These things should be well attended to, as doing so will help to economise room, which is a most important affair with those who possess only one house. Evergreens in pots should be procured to take the place of flowering window plants.

STOVE.

Keep a vigilant eye over all stove plants at this season, taking care that they are perfectly clean before they are placed in their winter quarters, for no advantage can be obtained from wintering vermin. See that all plants are properly staked and divested of dead leaves. Tidiness in all gardening operations is a great recommendation; an ill-grown plant is bad enough, but when insects are added to bad cultivation it becomes intolerable. Encourage the different kinds of *Egonias* for winter-flowering, giving them larger pots if required. Promote also the growth of *Achimenes picta* and *Gesnera zebrina*, plants which add much to the beauty of the stove during winter. They are justly considered two very valuable acquisitions for this purpose. Look, also, after *Euphorbia fulgens* and splendens; they are likewise two first-rate plants either for enlivening the stove or bouquet when scarcely anything else can be had. Proceed with the *Orchids* as detailed in former calendars, dispensing with shading altogether if possible. Hardening growths is henceforth the main business.

PITS AND FRAMES.

Every week at this period will bring the business of housing tender plants, the omission of which will peril the welfare of valuable stock that cannot be readily replaced. Where pits or frames are at liberty, or can be made so, by rooting-up the remains of exhausted *Cucumbers*, *Melons*, &c., there is no absolute necessity for stationing every plant or tribe where it is to remain throughout the winter. Protection of this sort for a short period will contribute more than houses to the production of sturdy growth and well-ripened wood, possessing a greater tendency to blossom and being more capable of enduring a severe winter. In such places the plants must be secured from the depredations of the earth-worms. This is easily accomplished, especially when the frames are raised above the ordinary ground level, by a good soaking of lime water, followed by a good coating of cinder ashes 3 inches in thickness. Nearly all house plants may be kept thus, except, of course, stove plants and *Orchids*, until the early part of November, taking care to mat up at night in suspicious weather, and to give abundance of air in the day. The glasses or lights should, by all means, be washed thoroughly. Such a course as here detailed will prevent the hurrying-off of late annuals, *Achimenes*, and a variety of other gay subjects, in order to make way for the real

winter stock. Towards the middle of October the Chrysanthemums will require to be staged, if not before, and the housing of these is frequently the cause of a re-arrangement of a considerable portion of the other stock. Those who have a house or pit for everything will not need any advice on this head; the majority, however, are very differently situated.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Globe Artichokes.—These still continue to produce freely. Several authorities say, When you gather the head, cut down the flowering stem; but we do not find any advantage in doing so, as, when the first heads are removed, smaller heads are produced in succession from the axils of the leaves, lower down on the first stem. With mulchings and waterings in a dry season the *Globe Artichoke* may thus be kept on fit for use for a long time. Where Artichokes are considered luxuries (and some things are looked upon as such in proportion to the time that it takes to get at and enjoy their delicacy), it is desirable to plant a fresh row of good strong roots every spring, as these will produce later in the autumn than the general crop. It is safest to put a lot of long litter over the crowns in winter.

Jerusalem Artichokes.—These are greatly relished in many places, cooked in various ways, but more especially in soups. Could the use of them be made popular, they would be no bad substitute with those who prefer a waxy Potato to a mealy one. They produce best when planted afresh every year in rows 4 feet apart, and 18 inches from each other in the row; but they will stand for years in the same ground, and afford plenty of produce, only the tubers will not be so regular. Almost all soils come alike, though they grow strongest in good loamy ground. This season they have grown with us to an immense height, though planted on the north side, close to a thick evergreen fence. We have never known anything like a disease affecting them, and we have scarcely ever seen the tubers interfered with, except by rats and pheasants. We have often been surprised that they have not been more planted in the open parts of coverts and game preserves; the stems would give shelter, and the roots abundance of food.

Potatoes.—Sorry we are to learn that the dread disease is committing great ravages in this neighbourhood, and, as was the case last season, many are giving way that were housed in first-rate condition. The reds and other coloured kinds seem to be more exempt than the whites, and, as stated formerly, the crops grown in the open fields, and not too close in the rows, are less affected than those grown in confined gardens. It is grievous to see how many cottage gardeners, who depended on their Potato crops to carry them through the winter, will be pinched and disappointed. In all our experience we never saw better crops or better tubers in gardens; but these frequent visitations should lead, in prudence, to the growing of more vegetables, and especially Turnips, Carrots, and Parsnips. We do not wonder that hardworking men in the country care less than their town brethren about a dish of Greens when they get home at night; for, after all, it takes a good basketful of them to make much bulk when boiled, and even then the nourishment they yield does not satisfy like a Potato or a Parsnip.

One field of Potatoes we have seen that has not shown a trace of the disease; but here a singular freak presented itself. The land was well prepared, and well dunged with rotten dung, but not long after the Potato stems were above ground the foliage assumed a hard, brownish appearance, something like that which we said appeared in the case of Celery in some places, and by-and-by moist weather set in, and altogether the foliage began to fall. The crop in consequence is poor, the tubers generally not larger than a Walnut, but they are fine in quality, and like so many balls of flour when boiled. We could have understood all this if the ground had been poor as well as fresh, but we were informed that the land was manured quite as heavily as for Turnips. It is just possible that the manure may have been rather fresh (but of this we have no evidence), as then the Potato might have received a check at first. As it is the matter is perplexing, like everything else about the Potato.

Cabbages.—Watered the last-planted Coleworts, also Cauliflower just coming in. Can any one tell us how to have Cauliflower as fine and compact in September and October, as it comes without our aid in May, June, and July? As we have not taken all our Onions up, planted Cabbages intended for spring in part of the ground cleared and prepared, and pricked

out a lot of good plants in a border, to be lifted and planted when the other ground is properly prepared. We have long proved that the main crop of Cabbages forms a fine succession to Onions, and if a little dung can be trenced down all the better, as these Cabbage plants turned out now will most likely produce all the summer of 1868, and in the spring of 1869. Cabbages, however, are about the worst precursors to Onions. We like young Coleworts from sowings in May and June, which yield nice little heads in autumn, and in mild seasons on to the time when young Cabbages come in; but where ground is scarce, one plantation of Cabbages in the autumn, and no burst heads allowed to remain, will almost give a succession of all sizes for the season. In planting now, it is well, in such a season for slugs, to scatter some fresh lime and soot over the ground, and rake and point it several times with just the point of a fork before planting. Even that will not dispense with future care. If the ground is dry on the surface after the above dressing it is also well to roll it with a light roller, as that will present a smooth surface, and, therefore, fewer hiding-places for the enemy. A dusting of lime and ashes, and a light scuffle with the hoe, just to break the surface, but not enough to make it rough, will also make all such slimy visitors uncomfortable. When the plants are fairly established, the ground may be stirred with the point of a fork, to let the air into the soil. Nothing makes a better return for such little attention than the Cabbage, and one grown quickly and just heating well, is a treat to any one. Filled in empty spaces with Greens of any kind, as they will come in useful before the fresh Cabbages come in freely in spring.

Celery.—Took the opportunity of fine dry days to tie up the heads, and clean the bottoms where they needed it. Except for use by-and-by, we will not be in a hurry earthing-up the main crops. Our Celery has hardly had a hand-watering since it was planted, the rains have been nearly sufficient for this and other things likewise. We do not think it is quite so strong as when we gave it manure-waterings. The saving of the water-pail has not been all gain.

Cauliflowers.—Marked out places for some hand-lights on a sloping bank, and pricked out young Cauliflowers to be covered with hand-lights ere long. Most likely will put a lot in 60-sized pots, and keep them in the orchard-house, and these when shifted in spring into larger pots, and turned out into well-pulverised soil in March, give good and early cuttings. We hope we shall escape the ravages of rats this season. Two years ago they almost destroyed our Cauliflowers, not eating the young plants to any extent, but cutting them down to the surface of the ground, just as they did lately with some of our best Pelargoniums. We must tar the first rat we catch that is not much hurt. For some time we did not see the trace of one, and now they are crossing our path in all directions. Tar is one of their abominations. We have saved Melons in boxes by running tar all round and below the bottoms of the boxes outside, and the linings over it kept it moist.

Carrots and Parsnips.—It is as well, if the ground is not wanted, to leave the latter in the ground, except what are needed for use; but Carrots, spring-sown, generally suffer if left too long in the ground. They will be cleaner and freer from worm and spot if taken up in the beginning instead of the end of October.

FRUIT GARDEN.

Stone fruit will ere long become scarce, but it wants considerable attention as yet to keep it from dropping and to protect it from enemies. The Walburton Admirable Peach is now in fine condition in the late orchard-house, and Barrington and Royal George Peaches out of doors. Late as in some things the season has been, we fear that October Peaches will be little seen in this district after the first part of the month. Plums, too, will soon be over, except Coo's Golden Drop and other late kinds. The Golden Drop has ripened on some little trees in the orchard-house, and the flavour was more like that of a rich preserve than of a Plum. Were we rich enough to have a little orchard-house of our own, we should be greatly tempted to fill it with Coo's Golden Drop Plum, train the tree to a rough trellis 20 inches from the roof, either have dark glass or shade in bright weather, with plenty of air all the summer, after the fruits were fairly swelling, and this would keep the fruit later even than if the trees were out of doors; and then from the end of autumn on to Christmas we should expect to gather the richest of all Plums when the Plum season was thoroughly over. Even in our late orchard-house, which we could not keep cool enough owing to other things, some little trees in pots of Coo's Golden Drop have the fruit well swelled,

but yet green and hard. We are convinced that the Walburton Admirable Peach, and late kinds as Late Admirable, Catherine, Téton de Venns, and Salway, might be had very late in good condition under glass, and would thus come in as valuable auxiliaries in the country for shooting-parties.

Many of the trees in-doors and out of doors have been roughly gone over to remove laterals, &c., and the more pruning is done now the better for the next season. All weak secondary and tertiary growths on trees intended to bear fruit act more as exhausters than feeders, and present a larger instead of a smaller surface for the rays of the sun, now diminished in force, to act upon to insure perfect maturation of the wood. The ripening of the wood now ought to demand as much thought as the ripening of the fruit. We wish we could even have greatly thinned our pyramidal Pears, and will remove if possible the spotted fruit from the late kinds, as that will help them considerably, for independently of being too thick, a number were considerably marked by a hailstorm. Apples in the kitchen garden on low bush trees, are in general a heavy crop. On other trees in a small orchard we have none, but that is chiefly owing to their proximity to the thatched buildings, from which the birds come every spring, and scarcely leave a bud behind them. But for the noise of the gun in spring, and other deterrents, the small trees in the garden would have shared a similar fate, instead of being weighted to the ground with fruit. Small low trees are, however, much more easily protected from such ravages than orchard trees, and then it is so pleasant to be able to manage them, and do what is necessary to keep them in order. These low trees were heavily syringed with lime-wash several times in spring, but that alone would not have kept the small birds from the buds; but they, as a rule, avoid as dangerous a white colour. Common nets are, if not thoroughly secure, a temptation rather than otherwise; but if we had nets that would keep a white colour, we have no doubt we should gain a great advantage.

Strawberries.—Not only in the case of fruit trees, but also in that of Strawberries, we are too well reminded of the old axiom of the teacher, "Do as I tell you, do not do as I do." We know full well that example is better than precept, but then it is well to give the precept, especially when people do not know but that you also give the example. Well, we have dwelt on the importance of clearing all plantations of Strawberry plants from runners, and if old plantations, even thinning the stools; and the bulk of ours still wait attending to. We never have to complain of the want of plenty of Strawberries; but still we know that unusually fine crops depend something on having the plants cleared of their numerous progeny, and the ground surface-stirred and mulched early, so that the roots shall be a little protected, nourishment washed down to them, and sun and air allowed to play freely among the leaves and buds that are left. Those who wish to excel in this respect must be guided by our advice, and not by our example. We would have wished all this done at least a month ago.

In the case of pots, went over them, pulled out weeds with the point of a knife, cut off all runners, just broke the surface soil, and gave a little more room to the pots, where the plants were standing rather thickly, that the sun might act on each leaf. This season the plants are not so strong as we have had them, partly owing to the showers that have made us dispense with manure-watering. We have placed a little soot and a pinch of guano on the surface, but that does not make up sufficiently for our manure-waterings. Last season, too, our plants were not over-strong, but they fruited exceedingly well, and then we came to the conclusion that it was possible to have the plants with too strong a growth, as then the buds were not likely to be well matured. We pricked out more runners than we have potted, and forthwith will dig a piece of ground, enrich it at the surface, plant out a lot of these pricked-out runners about 6 inches apart, and then if we want them we can lift and pot, or transplant into beds under glass in spring. Such plants do admirably when moved in March and onwards, but for early work the plants must be thoroughly established in the pots in the autumn, and the ball be as firm with roots as a round Dutch cheese is to the touch.

ORNAMENTAL DEPARTMENT.

Here the work has been a repetition of that of previous weeks. We have again been presented with the fact that there are many ways of securing the same object. We stated how we had to make a large square of gravel firm and dry without making drains through it, or employing much labour or fresh material, by merely getting rid of part of the fine worn-out surface, picking, riddling to remove mere dusty

matter, rolling and dusting the surface to make it fine, merely sloping it to both sides and the farther end from the house, where there were cesspools to catch the water and take it to one drain. The rains sweep off at once, and after something like a flood the other day, no rain stood, and half an inch from the surface the under stratum was quite dry. With plenty of material we might not make a piece of entrance gravel in that way; but we feel sure it will answer until the surface is again thoroughly worn out, as even when wet the wheels of a carriage scarcely show where they have been, and not at all when dry. We would not allude to this subject but for the simple fact, that many who make expensive roads and walks are not sufficiently aware that after all it is the ground that carries the weight put on the walk, and that the bearing of the weight equally depends almost entirely on a smooth unbroken surface. One of the most lasting roads we ever had anything to do with, was made through a marshy wet meadow. It was always in a puddle, low, and muddy, though it had had an immense quantity of stones put on, which quickly went out of sight. A lot of clay and the tops of White and Black Thorn hedges had to be cleared away, and with layers of these, Thorn and clay, the position of the road was covered and raised, and then gravel was placed on the top, and the sides bevelled off, so that the road was higher than the marshy ground. For twenty years that road has scarcely needed repair, the gravel merely being pulled into the ruts for the first few months. For many years, when a heavy waggon with four horses used to go over this road, the ground would seem to sink below the wheels a little, but rise immediately the wheels passed. The surface soon became so smooth that even wheels made no impression, and some three years ago, when digging down, we found the Blackthorn and even the Whitethorn quite sound. Chalk makes a fine bottom for either walks or roads where it can be found, but the chalk must not come near the surface, or the frosts and deluges of severe winters will make sad havoc if there are openings or hollows on the surface.

We have gone on with clearing beds, keeping lawns short, &c., and have been obliged to water a few of the centres of beds notwithstanding the rains. We find, also, that many shrubs, as Sweet Bay and even some Pinuses have suffered from want of water, as the heads threw the rain beyond the roots, and the sun has been more powerful than usual when the days were clear and unclouded. We have passed many shrubs that had enough to do to hold their own in a bright day, and we found that the soil beneath them was so dry that we would have liked to have given them a dozen pails of water. We think that shrubs often suffer more in this way than is generally supposed.—R. F.

COVENT GARDEN MARKET.—SEPTEMBER 25.

LITTLE alteration has taken place in quotations since our last week's report. Peaches have advanced in price.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	1	6	Melons..... each	1	6	to 3	0
Apricots doz	0	0	0	0	Nectarines..... doz.	3	0	6	0
Cherries lb.	0	0	0	0	Oranges..... 100	8	0	14	0
Chestnuts bush.	0	0	0	0	Peaches..... doz.	4	0	10	0
Currants..... ½ sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black doz.	0	0	0	0	Pine Apples lb.	4	0	0	0
Figs doz.	2	0	3	0	Plums ½ sieve	2	6	5	0
Filberts..... lb.	1	0	0	0	Quinces doz.	0	0	0	0
Cobs lb.	1	0	0	0	Raspberries..... lb.	0	0	1	0
Gooseberries .. quart	0	0	0	0	Strawberries..... lb.	0	0	0	0
Grapes, Hothouse.. lb.	1	6	4	0	Walnuts..... bush.	10	0	20	0
Lemons..... 100	8	0	12	0	do. per 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes..... each	0	3	0	0	Leeks bunch	0	3	to 0	0
Asparagus bundle	0	0	0	0	Lettuce per score	1	0	1	6
Beans, Kidney, ½ sieve	2	0	3	6	Mushrooms ... pottle	2	0	3	0
Scarlet Kidney, ½ sieve	2	0	3	0	Mustd. & Cress, punnet	0	2	0	0
Beet, Red doz.	2	0	3	0	Onions, per doz. behs.	5	0	0	0
Broccoli bundle	0	6	1	6	Parsley..... per sieve	3	0	0	0
Bras, Sprouts ½ sieve	0	0	0	0	Parsnips doz.	0	9	1	0
Cabbage doz.	1	0	1	6	Peas..... per quart	0	0	0	0
Capiciums..... 100	2	0	3	0	Potatoes bushel	2	0	3	6
Carrots..... bunch	0	6	0	8	Kidney doz.	3	0	4	0
Canterflower doz.	2	0	4	0	Radishes doz. bunches	0	9	1	0
Celery bundle	1	0	2	0	Rhubarb bundle	0	0	0	0
Cucumbers..... each	0	4	0	8	Savoy doz.	0	0	0	0
Pickling doz.	2	0	0	0	Sea-kale basket	0	0	0	0
Endive doz.	1	0	0	0	Shallots lb.	0	8	0	9
Fennel bunch	0	3	0	0	Spinach bushel	2	0	3	0
Garlic lb.	0	8	1	0	Tomatoes..... per doz.	2	6	3	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	0	0
Horseradish .. bundle	2	6	4	0	Vegetable Marrows, dz.	1	0	2	0

TRADE CATALOGUES RECEIVED.

William Paul, Waltham Cross, London, N.—*Rose Catalogue* 1867-68.

Butler, McCulloch, & Co., Covent Garden Market, London, W.C.—*Autumn Catalogue of Dutch and Cape Bulbs, Flower, Vegetable, and Agricultural Seeds, &c.*

Hooper & Co., Central Avenue, Covent Garden Market, London, W.C.—*General Catalogue of Dutch, Cape, and other Flowering Bulbs, Flower and Kitchen Garden Seeds, &c.*

W. Rollisson & Sons, Tooting, London, S.—*Catalogue of Bulbs, Roses, Grape Vines, Japanese Plants, &c.*

E. G. Henderson, Wellington Road, St. John's Wood, London, N.W.—*Catalogue of Bulbs, Roses, Fruits, &c.*

G. Brunning, St. Kilda, Melbourne, Australia.—*Catalogue of Ornamental Trees, Shrubs, Fruit Trees, &c.—Catalogue of Roses.*

TO CORRESPONDENTS.

*. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

BOOKS (T. T.).—No supplement has been published to the "Cottage Gardeners' Dictionary."

GARDENERS' EXAMINATIONS (A Young Gardener).—You will find the information you require in our No. 304, page 68, January 24th, 1867.

HYBRIDISING PELARGONIUMS (*Ignoramus*).—In the "Cottage Gardeners' Dictionary," directions for raising plants from seed, the terms form, substance, size, and colour, relate to the blossom only.

VINE CULTURE UNDER GLASS (*Blackrock*).—You have not sent your name or address!

MEASURING LAND (S. J. T. M.).—London's "Self Instruction" will give you the information you need.

NEW WELL PUMP (M. H.).—You had better write to the Editor of the *Pall Mall Gazette*. We cannot furnish the information you need.

PLANTING A VINEY (B. W. S.).—We are sorry we missed your question. We would plant the Vines now, but if the roots are out of doors, we would protect the borders in winter with litter and glass or shutters, to exclude rain. Muscats will do very well along with Lady Downe's, and Barbarossa.

GREEN GAGE PLUM TREE UNFRUITFUL (R. G.).—Your Green Gage would, no doubt, be very much improved by taking it up, bringing the roots nearer the surface, and giving it a little fresh soil to grow in. The present is a good time to do it. First unnaul the tree from the wall, only leaving a few of the principal branches secured to the wall to prevent them from being broken. Dig a trench all round the tree 2 feet deep, or as deep as the roots, and about 6 feet from the stem; then with a fork work the soil carefully away from the roots, always drawing the fork towards the outside of the trench. When the soil has been taken away to within a foot or so of the stem, the whole may be carefully lifted up. If the tree is a heavy one it must be lifted by means of a lever. This should be done gradually, and as the tree is raised soil should be placed beneath it. In raising the tree see that the branches that are left fastened to the wall are suffering no injury. As soon as the tree has been raised to the desired height, spread the roots carefully out, sprinkle some fine soil amongst them, and frequently shake them with a small pointed stick so that the soil may become settled about them, taking care to keep the point of the roots the lowest. As soon as all the roots have been properly covered with soil give the tree a good soaking of water, then add more soil, and finish the operation with a thick mulching of rotten manure. If the weather remains dry syringe the tree two or three times daily. The roots will at once commence work, and the crop next year will not be injured if the operation is performed with care.

PROPAGATING VIOLA CORNUTA (*Idem*).—Take the cuttings off and strike them, the old plants may remain in the bed, or they may be removed to another place and planted. If they have a sprinkling of cocoa-nut refuse placed over them they will soon push up numbers of young shoots, which will at once root very freely into the refuse. These may then be taken off and planted, and if a little more refuse be put on the bed soon another batch of good plants may be obtained.

LOBELIA PUMILA ELEGANS (C. W.).—Apply to Messrs. E. G. Henderson and Co., Wellington Nurseries, St. John's Wood, London.

GRAPES NOT COLOURING (W. Ray).—We think the neglect of the previous season, and the very heavy crop, are the cause of the Grapes not colouring. If the house is wide, 4 feet of a border will scarcely be enough without heavy rich top-dressings, but if you can let the Vines roots run into an outside border, we would do so. The outside border must be lower than the inside one. The plants in the other house planted outside are most likely suffering from an over-crop. Try fewer next season. Their being so fruitful leads us to conclude that the roots are healthy, but if roots are deep it is much against the fruit colouring.

GLAZED LEAN-TO OVER PEACHES (H. Fay).—Your plan will answer very well, and with your trees on the back wall, you can have pyramids either in pots or planted-out in front. If commencing, we would put the latter in pots first. We do not see the use of the three wooden ventilators, though they may be desirable. One at top and bottom, 10 or 12 inches wide, would do. However, have the one in the middle if so disposed, it is well to have enough.

GRAPES DISEASED (J. D.).—They are very severely "shanked"—that is, the footstalk of each berry is ulcerated and decayed, so that the passage of sap is entirely stopped. This malady is usually caused by the roots of the Vine being in a cold ungenial soil, while the branches are in a hot moist atmosphere. Warmth to the roots and free ventilation in such cases prevent the occurrence of the disease.

ZONAL PELARGONIUMS (J. Watson).—If you like to challenge other growers of these beautiful plants to compete with your own, we will readily insert your challenge; but upon reconsideration you will think we are right in declining to insert either what the commercial traveller said, or any attacks upon the Judges.

NECTARINES SHRIVELLING (J. S. B.).—The Nectarine from its smooth skin is much more liable to suffer from sudden changes, excessive sun heat, and defective ventilation, than the Peach. We had a few fruit in an orchard-house that showed such symptoms as you describe; but as we could not conveniently give more ventilation, we spattered the glass with whitened water, and that arrested the evil. In such sudden changes as we have had this season, from dull weather to the brightest sunshine, the powerful sun tried the trees much, and a little shade was very beneficial. We feel confident that in your case more ventilation, a little shade, and a mere sprinkling of the floor and paths during the hottest part of the day, will rid you of the disappointment.

MUSCAT GRAPES SHANKING (R. H. T.).—The answer we have given to another correspondent will apply exactly to your case. You will do well to lift the Vine roots as you propose, if they have sunk too deeply into the border. Then mulch over the surface of the border and cover with tarpaulin, and adopt some other mode to keep the roots from being chilled during the whole season of growth.

GROWING LAVENDER FOR DISTILLATION (M. Anthonu).—Unlike most flowers, those of Lavender yield the most essential oil if gathered when they begin to fall off. Even then the produce is not abundant, 10,000 ozs. of flowers only yielding about 120 ozs. of the oil. They should be distilled as soon as gathered. We have no doubt that a perfume might be obtained by distillation from the leaves of Sweet-scented Verbena (*Aloysia citrodora*). The directions for distilling are lengthy, and are detailed in most encyclopedias.

PLANTING WATERCRESSES (*Bogner*).—We have seen a stream widened so that the water was only 3 or 4 inches deep, and offsets or slips taken of existing plants, and if long enough they were planted with a dibber in the bottom of the stream, the tops being long enough to show above water; or shorter slips may be laid on the soil or mud at the bottom of the stream, and a stone placed on them to keep them in place till they attach themselves to the ground. In either case it is best to let the tip of the cutting be above water. The plants should be in rows and a foot apart, or less if plenty of cuttings are to be had; they will quickly occupy the space. We do not know of any work on Watercresses.

SIZE OF KITCHEN GARDEN FOR FOUR PERSONS (M. T. F.).—If you live near London, or any other large town, we would advise you to buy your Peas, which take up much room, but you ought to plant a few Potatoes for early use only, as their freshness is a recommendation; but after September you will buy them cheaper. Allowing a fair breadth for Strawberry-beds and other small fruits, we should say that about half an acre is not too much, but everything depends on the quality of the ground and the quantity of vegetables wanted.

FENCE TO DIVIDE KITCHEN GARDEN FROM FIELD (*Idem*).—We recommend a continuous iron fence 3 feet 8 inches high, with four flat bars and a round one at top. Such a fence will cost about 8s. per yard, including standards a yard apart, and is both good in appearance, durable, and not likely to let the cattle find their way amongst your vegetables.

MANURE FOR GRASS FIELD (*Idem*).—If near a town where you can obtain manure of all kinds, procure any decomposed substance that is free from stones, for although the latter are not objectionable in tillage land, they are troublesome on grass. If in the country, obtain all the road scrapings you can, or ditch parings, and if these be mixed with lime six months before being used, the compost will be all the better.

FLOWER-POTS (M. J.).—The following are the technical names and their sizes in inches:—Thimbles and thumbs; any size under 3 inches diameter at the top.

	Width of top inches.	Depth inches.	Old Name.
Three-inch pot	3	4	60's.
Five-inch	5	5	48's.
Six-inch	6	6	32's.
Eight-inch	8	8	24's.
Nine-inch	9	9	16's.
Eleven-inch	11	10	12's.
Twelve-inch	12	11	8's.
Thirteen-inch	13	12	6's.
Fifteen-inch	15	13	4's.
Eighteen-inch	18	14	2's.

Tobacco Powder for DESTROYING WOODLICE (H. J. R.).—The ground tobacco will destroy all insects if burned, on account of the sulphur it contains, and it will destroy vegetable life also. You will see the ground tobacco advertised.

ASSIMILATION OF FRUITS (*Idem*).—Yours is a very curious instance of the stock having so much influence over the scion as to change the fruit of the latter to that of the former. Is there not some mistake? We should like to have more particulars, and to see specimens of the fruits.

DOUBLE BUDDING ON MANETTI STOCKS (*Idem*).—The supposed advantages of double budding are the more profuse flowering, a lessening of vigour, and enhanced size, and colour of bloom.

SULPHATE OF AMMONIA (T. Y. C.).—Sulphate of ammonia may be diluted with ten times its volume of water, and applied to ground intended for vegetables, or it may be poured between the rows. It will destroy slugs, but should not for that purpose be diluted with more than six times its volume of water.

CONSUMING SMOKE (*R. Cordell*).—One of the best modes for preventing any nuisance to your neighbours would be to use dry wood for lighting, and then at first bruised coke, and common coke afterwards. Witty's smoke-consuming furnace answered tolerably well for lessening the smoke. The fire was lighted on the bars in the usual way, but then there was an inclined plane behind the bars for the mass of the fuel to rest upon. As the fuel on the bars burned, the heated fuel on the incline was thrust forward, and thus the smoke from the fresher fuel passed over and was burnt by the live red-hot fuel. This would do a good deal under your own management, or under a person who made the prevention of smoke a chief object, but like many other devices it would fail when the fresh fuel was thrust at once upon that which was red hot. Much may be done in the usual common furnace if the incandescent fuel is kept at the farthest end of the furnace nearest the flue and chimney, and the fresh fuel is placed next the furnace-door, to be pressed forward after it is heated and pretty well coked. In fact, three parts of the smoke after just lighting are due more to the stoker than to any absolute necessity in the case, and it is very difficult to get a common workman to enter sufficiently into the subject as to lessen smoke, and, consequently, lessen expense for fuel. We have tried two modes besides, and satisfied ourselves that under our own management, or under that of any one who felt interest in the matter, there would be little or no smoke. The first is applicable to any kind of furnace or mode of heating. The furnace-door was made double; the inner door should be placed half an inch at least from the outer door, and all made air-tight between them at the top and sides, and open at the bottom. In the centre of the outer door is a small opening, with a regulator for the admission of air. In lighting proceed in the usual way, shut the furnace-door, and open the ash-pit door. As soon as the fire has taken and there is a good draught, shut the ash-pit door, and just open the ventilator a little in the furnace-door, and the air sweeps in, comes against the inner heated-plate door, goes out at the bottom, and passes over the fuel, and the thick smoke of a few minutes ago will be changed into an almost invisible vapour. This we have satisfied ourselves of scores of times; but, then, if the plan is not attended to, you may save yourself having the trouble of a ventilator in the outer furnace-door. The other plan has reference chiefly to heating by a boiler, and where there is only a short flue round and from the boiler before it goes to the chimney. An iron frame was set in for cleaning the flue and chimney, just a little below the damper in the chimney, and the drilling a small hole in that soot-plate—say a quarter of an inch in diameter, and 4 or 5 feet from the furnace and boiler, greatly lessened the smoke, and all the more when the damper was used to lessen draught. The fresh air admitted by this hole seemed to send the heated air and smoke back again over the fireplace, and thus the smoke being consumed, less appeared at the chimney-top. Rightly used these simple modes will greatly mitigate the evil. We hope some correspondent will assist in this matter, as there may be many simple means that could be adopted without going to the expense of a smoke-consuming apparatus, as now in many cases demanded by law.

PLUMS (*E. M. B. A.*).—Your list contains nearly all the best, but as you have a favourable place still vacant, let it be occupied by the Apricot Plum, *Alcotée blanche* of the French.

PRUNING ROSES (*Amateur*).—We recommend autumn pruning when the Roses are wanted to bloom early, but in no case should the operation be performed until the leaves have fallen and the wood is mature. From the middle of February till the middle of March we consider the best of seasons for Rose-pruning. You may merely take off the points of the shoots of the dwarf trees, and peg the long shoots down; but we prefer to cut in the strong shoots to six or eight good buds, the moderate strong to three or four, and the weak to one or at most two eyes. The cuttings would strike now if put in pots plunged to the rim in coal ashes in a cold frame, and kept close and shaded from sun. Many would also grow if inserted in a warm border in the open ground.

RIPENING GREEN TOMATOES (*P. J. N.*).—Tomatoes though green will, if of good size, ripen fully if they are cut with some part of the stem of the plant, and hung up in a viney or other dry warm house. Our correspondent wishes to know "where Dr. De Briou's paint can be procured."

SHORTENING RASPBERRY CANES (*H. N. O.*).—The proper time for shortening Raspberry canes is when the leaves have all fallen.

DRESSING STRAWBERRY-BEDS (*Idem*).—About the middle of next month is a good time for top-dressing Strawberry-beds; it is a good practice, and indispensable on light soils. The dressing may be from 1 to 3 inches thick, according to the vigour of the plants. If these are weak-growing, give a good dressing between the rows, and if vigorous, a less thickness of the old Melon-bed manure will suffice.

SELECT DESSERT PLUMS (*Idem*).—Jefferson, Kirke's, Angelina Burdett, July Green Gage, Green Gage, and Coc's Golden Drop.

SELECT DESSERT APPLES (*Idem*).—Devonshire Quarrctden, Oslin Ingetrie Yellow, Kerry Pippin, Lucombe's Pine Apple, and Wormsley Pippin.

AJUGA REPTANS VARIEGATA FOR EDGING (*J. B.*).—We have tried this plant as an edging for beds, and it is very useful, doing well in moist soils and situations, but in those which are rich and moist it is apt to lose its variegated foliage. It is perfectly hardy with us, both on rockwork and in the open borders; but for bedding purposes it is well to afford it the protection of a frame, as it can then be the better grown for cuttings, which strike readily in a moist situation with or without heat.

CLIMBERS FOR AN ARCADE WITH A NORTH ASPECT (*Cambria*).—But few plants will thrive in such a situation. The different kinds of Ivy would succeed, and *Ampelopsis hederacea*, *Jasminum nudiflorum*, *Cratægea pyracantha*, and *C. leucocarpa*, as may the following Ayrshire Roses—viz., Dundee Rambler, Alice Gray, and Ruga.

ZONAL PELARGONIUMS FOR BEDDING (*Fred*).—We consider *Stella* one of the most effective, and a dozen good bidders are—*Rose Henderson*, *rose*; *Excellent*, *rosy scarlet*; *Volcano*, *scarlet*; *Waltham Seedling*, *glossy crimson with purple tint*; *Beauté de Surènes*, *deep rose*; *Salmon Nosegay*; *Rebecca*, *cherry colour*; *Primo Minister*, *orange scarlet*; *Cybilster*, *orange scarlet*; *Pench Nosegay*; *Provost*, *rosy scarlet*; and *Adonis*, *scarlet*. Clipper we have not had sufficient experience of to warrant our recommending it for bedding purposes. See what is said by "D. Deal," in another column.

TAKING UP MRS. POLLOCK AND OTHER PELARGONIUMS—**WINTERING COLEUS AND IRESINE HERBSTII** (*Idem*).—You should at once commence taking up the plants you name carefully, placing them in pots well drained and small for the size of the plants. The *Coleus* and *Iresine Herbstii* should be placed in a house with a temperature of not less than 45°. The *Pelargoniums* will be better than cuttings for next year, but both are desirable. The *Coleus* and *Iresine* will be best from cuttings inserted in February or March. We do not know of any remedy for the insect that eats the leaves of your *Pelargoniums*.

COPING-BOARDS FOR GARDEN WALLS (*E. S.*).—The stone coping projecting 3 inches is ample for every purpose, except protecting the blossoms of the trees from frosts in spring, at which time wooden projecting coping-boards are useful. They should, however, be so fixed as to be capable of being removed, and should only be used at the period named, for if kept over the trees constantly, they not only prevent rain refreshing the foliage, but to some extent shade the trees.

RE-POINTING GARDEN WALLS (*H. J. C.*).—All you can do is to have the walls repaired and pointed, picking out the worst of the old mortar, and unless the work is done well, it is only labour and materials thrown away. After pointing you may wash the wall with a composition of equal parts of lime and soot, with sufficient urine to bring it to the consistency of whitewash. Avoid the proposed coating of the wall with gas tar or black varnish.

CLEMATIS FOR GREENHOUSE (*Mrs. Hendricke*).—You could not have a better companion for *Clematis lanuginosa* than its variety *C. lanuginosa pallida*; but if you require variety, *C. Jackmanni* will suit you.

NAMES OF FRUIT (*C. B. Meidstone*).—White Russet, an Irish Apple. (*A. B. London*).—The Peach is *Noblesse*; the Nectarine *Violetta Hative*.

NAMES OF PLANTS (*P. C.*).—1, *Sidalcea oregana*; 2, *Ammi Visnaga*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending September 24th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 18	30.320	30.209	63	49	60	58	N.E.	.00	Cloudy; clear with scattered white clouds; cloudy.
Thurs. 19	30.096	30.015	63	49	60	58	E.	.00	Fine throughout; overcast at night.
Fri. . 20	30.144	30.122	68	47	59	59	N.	.00	Fine; low white clouds; clear at night.
Sat. . 21	30.137	30.003	66	54	60	59	S.W.	.13	Uniformly overcast; clear and fine; clear at night.
Sun. . 22	30.039	29.857	65	38	59	58	N.W.	.06	Rain; cloudy; clear at night.
Mon. . 23	30.014	29.887	66	38	59	58	S.W.	.01	Rain; cloudy and rather boisterous; clear.
Tues. . 24	30.375	29.994	69	31	58	57	N.	.00	Boisterous; masses of dusky white clouds; clear.
Mean	30.159	30.013	67.14	43.71	59.28	58.14	..	0.20	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

POULTRY VEXATIONS.

A LADY from Dorsetshire writes to me thus—"What am I to do? All my Dorking chickens are dying. Nothing could sit and hatch better than the old hens in the spring, and they produced more than two hundred. From a fortnight or a month old the chickens invariably began to look unhappy, feathers staring, wings drooping, but no signs of gapes, or cold, or any illness. My poultry woman tried every invention that

could be thought of, and at last almost gave up in despair. They dropped off one after another, and were found dead at various ages, from a month to two months. I then came down into the country and took them in hand entirely myself. I changed the ground, entirely changed the food, let the hens run loose with their chicks, gave them camphor, sulphur, everything, in fact, I could think of, still they died off and off. At last I was in despair myself, and concluded that the fault was in the breed, that they were too delicate and well-bred for this chalky soil.

"But now comes the strange part of this business. Quite lately they have shown another symptom, and that is, all the

feathers on their heads and throats seemed to die off, they became bald, and looked thoroughly mangy; and now after the most careful examination with the microscope, I discover that every chicken and every fowl I have, cock and hen, has this peculiarity—the roots of the feathers about the throats and heads are covered with these small particles, that look like the ticks on sheep in miniature. I can see no sign of life in them; but whatever they may be, the feather is evidently consumed till the bird is bald, and it is also quite evident that the nourishment and life of the bird is consumed. I have now a hatching of birds a fortnight old, hatched on the ground out of doors, kept entirely apart from any other bird. The chicks have thriven till now, when we find their heads are covered with this powdery matter, and many of them already bald. There is no doubt they will all die.”

Can you, or any of your poultry correspondents, account for this mortality and singular disease amongst the Dorking chickens? I enclose some of the feathers for your inspection.—A. K. C.

[We thank you much for your enclosure, and at our first leisure will subject them to very severe microscopic examination. These parasites thrive wherever fowls cannot obtain access to dust. If you supply their haunts with the finest dust or road grit, and to every bushel of such you add a pound weight of common black sulphur, you will find them all have recourse to it, and it will cure them. A condition of the life of these pests is locomotion, and they cannot travel in the dust. Another cure is to take common ointment, rub some at the back of the head, and round the neck, on the backbone, two small spots, and a little on the rump and under each wing. The chickens become bald because the parasites work their way to the head as far as they can go, before they begin operations, then they eat their way downwards. No animal can live that is beset externally by parasites. It loses flesh and courage, then it takes to squat about, and at last dies miserably. If you examine such a one you find the flesh brown, the skin dark and tight, shrivelled all over the body, the feathers dried up and shabby, and the face long, thin, careworn, and troubled. In short, the poor birds are worried to death.]

TESTIMONIAL TO MR. HEWITT.

ENCLOSED I send you my draft for £5, as my donation to the testimonial for Mr. Hewitt, for I feel there is nobody more worthy of receiving such a special notice at the hands of poultry exhibitors, of which body I am a humble individual. I have denied myself this pleasure till I saw that there was a committee of gentlemen appointed to carry out this worthy object in accordance with Mr. Hewitt's views, as I feel certain all subscribers will coincide with me in saying is their wish.

I cannot conclude without making a suggestion to those numerous committees who for so many years have enjoyed the gratuitous services of this highly esteemed judge—namely, that they should not neglect this valuable opportunity of recording their esteem, good wishes, and high appreciation of the zeal and capability of Mr. Hewitt, by lending a helping and liberal hand in this popular movement. If this be done it will swell the list valuably.—R. W. BOYLE, *Galtrim House, Bray, Co. Wicklow.*

SUBSCRIPTIONS ALREADY RECEIVED OR PROMISED.

Proprietors of THE JOURNAL OF HORTICULTURE.....	£10 0 0
<i>The Field</i>	5 5 0
A Lady Exhibitor.....	5 0 0
An Old Schoolfellow.....	5 0 0
Mr. J. Alport.....	1 1 0
Mr. Mathew Davies.....	2 2 0
James Fletcher, Esq.....	10 0 0
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The Rev. W. J. Mellor.....	2 2 0
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W. B. Tegetmeier, Esq.....	1 1 0
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Mr. Jessop.....	1 1 0
R. W. Boyle, Esq.....	5 0 0
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Mr. Tomlinson.....	1 1 0
By Mr. Tomlinson:	
Thomas Boucher, Esq.....	1 1 0
Howard Applebeck, Esq.....	1 1 0
Mr. John Heape.....	1 1 0
By Mr. Fletcher:	
C. W. Brierley, Esq.....	5 5 0
Mr. John Douglas.....	1 0 0
Captain Heston.....	1 1 0
Mr. W. Gilliver.....	0 10 6

MIDDLETON POULTRY SHOW.

(From a Correspondent.)

THE ninth annual Exhibition took place on the 19th inst. in a field behind the rectory, kindly lent for the occasion by the Ven. Archdeacon Durnford, and which is very pleasantly situated for exhibitions of this kind. The weather being all that could be desired, the attendance of visitors was very great, there being not less than 30,000 persons present at one time; and the Committee may be congratulated on the success which has attended their efforts to bring everything to such a successful termination. The birds shown were as a rule very good, and the accommodation provided for them deserves most favourable mention. They were also very well attended to, and arranged so that the thousands of visitors had not very much trouble in obtaining a view of them; they proved one of the greatest attractions of the day.

The *Gane* fowls mustered very strongly, and were of first-rate quality. The Duke of Newcastle took the cup with a first-rate pen; Mr. Halsall, of Ince, taking the first prize for Any other variety. For the best pair of pullets any variety there was an exceedingly good competition, not less than thirty-three pens of first-rate quality being entered. Mr. Whewell, of Radcliffe, was victorious with a first-rate pair. The *Spanish*, also, were numerous, and some of them were very good. Next in order came the *Dorkings*. The Duke of Newcastle took the lead with a first-class pen, which was much admired. Of the *Brachmas* there were many pens, and Mr. R. W. Boyle, of College Green, Dublin, carried off the first prizes with first-class birds. Among *Cochins* C. W. Brierley, Esq., of Middleton, had an exceedingly good pen of Buffs, and closely following came Mr. W. A. Taylor, with some very good birds. Of *Hamburghs* there were many pens, and of them there was the best collection of chickens that has been brought together this season. Mr. Thomas Wrigley, sen., took the lead with a first-class pen of Golden-pencilled; but the Silver-pencilled were not of the very best description. The Golden-spangled were not of any special merit, but the Silver-spangled were exceedingly good, and Mr. James Fielding, Newchurch, Rosendale, succeeded in taking the silver cup for the best collection of *Hamburghs* of any class. The Black *Hamburghs* were also good, and seem to be more in favour than formerly. The *Game Bantams* were also very good, Mr. J. W. Morris, of Rochdale, taking the principal honours.

In *Ducklings*, Mrs. Seamons, and Mr. Leech, of Rochdale, were first in the Aylesbury and Rouen classes, respectively.

Pigeons were numerous, and among them were some first-class birds.

YOUNG BIRDS.

GANE (Black-breasted and other Reds).—First, Duke of Newcastle, Clumber. Second, R. Benson, Manchester. Third, T. Statter, Whitefield, Manchester. Highly Commended, T. Burgess, Whitechurch, Salop. Commended, J. Wood, Wigan. *Cockerel*.—First, R. Benson. Second, J. Fletcher, Manchester.

GAME (Any other variety).—First, J. Halsall, Juce, near Wigan. Second, T. Dyson, Halifax. Third, J. E. Pinder, Harpurley. *Cockerel*.—First, T. Dyson. Second, T. Wareing, Preston.

GAM (Any variety).—*Pullets*.—First, W. Whewell, Radcliffe, near Manchester. Second, T. Statter. Third, J. Wood. Highly Commended, J. Fletcher. T. Burgess. E. Aykroyd, Bradford (Brown Red); J. Brongh. Commended, W. A. Pope, Biggleswade, Beds.; S. Matthew, Stowmarket.

SPANISH.—First, J. Newton, Silsden, near Leeds. Second, D. Parsley, Kingsdown, Bristol. Third, F. James, Peckham, Surrey. *Cockerel*.—First, M. Farrand, Dalton, Huddersfield. Second, D. Parsley. *Pullets*.—First, W. Harvey, Sheffield. Second, J. Newton, Silsden, near Leeds.

DORKINGS.—First, Duke of Newcastle. Second, Mrs. Arkwright, Derby. Third, T. Statter. Commended, T. Pomfret, Preston. *Cockerel*.—First, J. Stott, Healey, near Rochdale. Second, Mrs. Arkwright. Highly Commended, Duke of Newcastle. *Pullets*.—First, Mrs. Arkwright. Second, Duke of Newcastle. Highly Commended, Hon. H. W. Fitzwilliam, Rotherham.

BRAHMA POOTRA.—First, R. W. Boyle, Dublin. Second, H. Lacy, Hehden Bridge. Third, Mrs. M. Seamons. *Cockerel*.—First, R. W. Boyle. Second, H. Lacy. Highly Commended, G. H. Wheeler, Middleton. *Pullets*.—First, R. W. Boyle. Second, H. Lacy. Highly Commended, Hon. Lady Douglas Pennant, Bangor, North Wales. Commended, A. H. Verity, Northenden, Cheshire; Rev. J. F. Newton, Kirby-in-Cleveland, Stokesley.

COCHIN-CHINA (Buff and Cinnamon).—First, C. W. Brierley, Middleton. Second, W. A. Taylor, Manchester. Third, H. Applebeck, Moseley near Birmingham. *Cockerel*.—First, W. A. Taylor. Second, Rev. C. Spencer, Attleborough. *Pullets*.—First, W. A. Taylor. Second, Rev. C. Spencer. Highly Commended, C. W. Brierley. Commended, J. Shorthose, Newcastle-on-Tyne.

COCHIN-CHINA (Any other variety).—First, J. Horrocks, Middleton. Second, J. R. Rodbard, Wington, near Bristol. Third, H. Lingwood, Woodbridge, Suffolk. *Cockerel*.—First, W. A. Taylor. Second, H. Lingwood. *Pullets*.—First, C. C. Sedgwick, Keighley. Second, W. A. Taylor. Highly Commended, J. Horrocks.

HAMBURGS (Gold-pencilled).—First, T. Wrigley, sen., Middleton. Second, H. Beldon, Eingley. Third, W. Parr, Patricroft, near Manchester. Highly Commended, H. Pickles, jun., Skipton, Yorkshire. *Cockerel*.—First, E. Buckley, Rochdale. Second, T. Wrigley, sen. Highly Commended, H. Beldon. Commended, H. Pickles, jun.; W. Parr. *Pullets*.—First, Messrs. Burch & Boulter, Sheffield. Second, J. Wrigley.

HAMBURGS (Silver-pencilled).—First, W. J. Baistow, Bingley. Second, H. Beldon. Third, J. E. Powers. *Cockerel*.—First, H. Beldon. Second, H. Pickles, jun. *Pullets*.—First, W. Wilson, Rawtenstall. Second, W. J. Baistow. Highly Commended, W. R. Park, Metrose.

HAMBURGS (Gold-spangled).—First, J. Wild, Ashton-under-Lyne. Second, T. Scholes, Thomson Lane, Hollinwood. Third, J. Chadderton, Hollinwood. Highly Commended, J. Preston. *Cockerel*.—First, J. Chadderton. Second, R. Ellis, Chadderton. Highly Commended, H. Beldon; H. Pickles, jun.; E. Brierley, Heywood. *Pullets*.—First, J. Wild. Second, J. Andrews, Ashton-under-Lyne.

HAMBURGERS (Silver-spangled).—First, J. Fielding, Manchester. Second, H. Pickles, jun. Third, H. Beldon. **Cockerels**.—First, J. Fielding. Second, A. Smith, Leeds. Highly Commended, J. Lees, Hollinwood; T. Fawcett, Baildon, near Leeds. Commended, H. Beldon. **Pullets**.—First, J. Parlington, Little Heaton, near Middleton. Second, M. Lancashire; Middleton. Highly Commended, H. Beldon.

HAMBURGERS (Black).—First, C. Sedgwick. Second, J. Mann, Stretstead. Third, J. Clegg, jun., Oldham. Highly Commended, J. Lancashire. Commended, J. & W. Holt, Middleton. **Cockerels**.—First, H. Beldon. Second, J. Clegg, jun. Highly Commended, J. Mann; J. & W. Holt. **Pullets**.—First, C. Sedgwick. Second, S. Lancashire. Highly Commended, Messrs. Ashtons & Booth, Broadbottom, near Mottram, Cheshire.

ANY OTHER VARIETY NOT BEFORE MENTIONED.—First, H. Beldon. Second, Col. Stuart Wortley, London (Houdans). Third, National Poultry Co., Bromley, Kent. Highly Commended, Col. Stuart Wortley (Houdans); T. J. Lancashire (Polands); N. Cook, Chowbent (Houdans). Commended, National Poultry Co. **Cockerels**.—First, H. Beldon. Second, Col. Stuart Wortley (Crève Cœur). **Pullets**.—First, W. R. Park (Crève Cœur). Second, P. Unsworth, Linton, near Newton-le-Willows. Highly Commended, Duke of Newcastle; Col. Stuart Wortley (Crève Cœur); National Poultry Co.

GAME BANTAMS (Any colour).—First and Third, J. W. Morris, Rochdale. Second, J. D. Newsome, Bailley. Highly Commended, W. F. Entwistle, Leeds. Commended, J. Holland, Manchester. **Cockerels**.—First and second, J. W. Morris. Third, J. Holland. Commended, C. W. Brierley, Middleton; J. D. Newsome.

BANTAMS (Any other variety).—First, T. C. Harrison, Hull. Second, W. A. Taylor. Third, Mrs. Dale, Scarborough. **SELLING CLASS** Any breed or colour.—First, W. A. Taylor. Second, W. Harvey, Chesham. Commended, J. Lee, Middleton. **Cockerels**.—First, W. A. Taylor. Second, J. Marchant, Halifax. Commended, J. Wild; G. J. Merrall, Manchester; T. Bott, Eury (Brahmas).

DUCKS (Aylesbury).—First and Third, Mrs. M. Seamons. Second, E. Leech. Highly Commended, J. W. Harrison. **DUCKS** (Rouen).—First, E. Leech. Second and Third, H. Ashton, Prestwich. Highly Commended, E. Leech; T. Houlker, Blackburn; T. Wakefield, Gillingham, near Newton-le-Willows; T. Eveleigh, Bolton; J. J. Waller, Kendal.

ANY OTHER VARIETY.—First and Second, J. Dixoo, Bradford, Yorkshire (Call Ducks). Third, G. & C. Furness, Accrington. **GEES**.—First, S. H. Stott. Second, Mrs. M. Seamons. Highly Commended, S. H. Stott; E. Leech; J. Hough, Northenden; J. & W. Rostrom, Manchester.

TURKEYS.—First, T. E. Richardson, Uttoxeter. Second, E. Leech. Highly Commended, T. E. Richardson. Commended, Rev. W. Mellor, Nottingham.

PIGEONS.

TRUMPERS (Almond).—First, J. Fielding, jun., Rochdale. Second, J. E. Bilward, Coventry. Highly Commended, T. Martin, Manchester. **BALLOONS OR BRANDS**.—First, J. Fielding, jun. Second, J. Lister, Keighley. **TRUMPERS** (Any other variety).—First, A. K. Stewart, Harborne, near Birmingham. Second, J. Fielding, jun. Highly Commended, J. Hawley, Bingley, Yorkshire.

CARRIERS (Cock).—First, H. Yardley, Birmingham. Second, G. H. Roberts, Prestole. **Hens**.—First, G. H. Roberts. Second, Capt. Mangnall, Styal, Cheshire.

POSTER.—Cock.—First, W. Harvey. Second, A. Heath, Calne, Wilts. Highly Commended and Commended, A. H. Stewart, Harborne, near Birmingham. **Hens**.—First, E. E. M. Roys, Rochdale. Second, A. H. Stewart. Highly Commended, W. Harvey. **BARBS**.—First and Second, Messrs. Maclure & Redford, Didsbury, near Manchester.

TURBOTS.—First, Capt. Mangnall. Second, J. Thompson, Bingley, Leeds. Highly Commended, Capt. Mangnall. Commended, J. W. Edge, Birmingham.

JACOBIANS.—First, J. B. Findar, Manchester. Second, E. Horner, Leeds. Highly Commended, Capt. Mangnall. Commended, J. Thompson; L. Glassey, Rochdale.

FANTAILS.—First, J. W. Edge, Birmingham. Second, E. Horner. Highly Commended, A. Parry, Rochdale.

OWLS.—First and Second, J. Fielding, jun. Highly Commended, E. Horner; J. Lister.

NUNS.—First, H. Yardley. Second, W. B. Park. Commended, Rev. A. G. Brooke, Knyton, Salop.

DRAGONS.—First, B. Carlisle, Riehton, near Blackburn. Second, D. Bromley, Over Hulton, near Bolton. Commended, J. W. Edge.

TRUMPETERS.—First, E. Horner. Second, E. Sheerman, Chelmsford. Highly Commended, E. Horner. Commended, H. B. Whittaker, Alkrington, Middleton.

ANY OTHER VARIETY.—First, T. Martin. Second, H. Yardley. Highly Commended, J. Hawley.

ANY VARIETY.—First, A. H. Stewart (Blue Fantails). Second, E. Horner. Highly Commended, T. Charuley, Blackburn.

RABBITS.

SPANISH.—First, Messrs. Wagstaff & Hanson, Thorne, near Doncaster. Second, T. Baker, Staffordshire. Commended, A. Parry, Rochdale.

ANGORA.—First, A. Parry. Second and Highly Commended, C. Rayson, Manchester. Commended, E. E. M. Roys.

HIMALAYAN.—First and Second, C. Rayson. Highly Commended, T. and A. Schofield.

ANY OTHER VARIETY.—First and Highly Commended, R. Wise, Hunts (Silver-Grey). Second, A. H. Easton, Hill (Silver-Grey).

The Judges for Poultry were Mr. Simon Fielding, and Mr. Tegetmeier, of London, for the *Humburg and Selling Classes*, and for *Ducks, Geese, and Turkeys*; and Mr. Tebbay, and Mr. John Martin for *Game, Spanish, Cochins, Brahmas, Dorkings, and Bantams*. Mr. Tegetmeier, of London, and Mr. R. Tebbay, Fulwood, Preston, were the Judges for *Pigeons*.

NORTH BRITISH COLUMBIAN SOCIETY.—It will be seen by a notice in another column that the date of this Society's Show has been changed from the 19th and 20th of December to the

12th and 13th of that month, and that all entries must be made by the 18th of November. The Committee determined on this alteration to prevent clashing with the Manchester Show.

CHESTER POULTRY AND PIGEON SHOW.

This Exhibition took place on the Race Course, at Chester, on the 18th inst. The day proving quite cool, though fine throughout, the attendance of visitors was unusually good, and among them were to be noticed most of the leading gentry of the neighbourhood. The Show, or rather shows, for it consisted of two distinct divisions, one open to the whole kingdom, and the other restricted to local exhibitors, was most excellently provided for, both as regards pens and covering, had bad weather occurred; and as regards the personal efforts of the Committee to carry out everything in strict accordance with the regulations of the Society, nothing was wanting, so that the strictest order prevailed. So very many shows being held just about the same day, no doubt limited the number of entries most materially; but we have great pleasure in recording the fact, that the quality of most of the classes would hold good place in comparison with most of even our longest-established exhibitions. Our remarks upon the classes generally must be somewhat brief, as many of the specimens were naturally changing their plumage rapidly.

In the *Dorkings*, the Hon. H. W. Fitzwilliam, of Wentworth Woodhouse, Rotherham, won easily with such pens as must be peculiarly hard competitors to excel at future meetings. They were shown in the best of health, and were peculiarly well grown. *Spanish* throughout both shows were especially good, but, perhaps, the two best classes in the whole collection proved to be the *Brahmas*. Mr. R. W. Boyle, of Dublin, showed a very fine pen of chickens, which, among a good entry, left competition far in the rear. Nor must we omit to mention another pen of *Brahmas* shown by Mr. C. Turner, of Chester, in the local department, that not only took the first prize in their own class, but also the silver cup given for the best pen of poultry of any kind exhibited in the local prize division of the Show. They were, as might be anticipated, immediately "claimed" at the entry price, five guineas. Some marvellously good *Polands* were shown, and the Silver-spangled *Hamburgs* were most excellent. In *Turkeys, Geese, and Ducks*, the Chester Show stood very high indeed, whilst the exhibition of *Pigeons* was very good, though many of the best specimens are at the present in the deepest pen-fether. If rules for the management of a show stand good for anything, this portion of the show was appointed exclusively for the exhibition of local birds. Rightly or wrongly, as individual exhibitor's interests may have suggested, certain it was, that a number of well-known pens of *Pigeons* were at once easily recognisable on the spot as not at all belonging to the locality; in fact, they were returned home the next day to their absolute owner. We regret to say that such practices are not by any means uncommon, to ensure the unfair attainment of "local" prizes; and in this case, as in all similar ones that have come within our knowledge, the party most anxious to dispute the awards, usually proves to be the individual who thus unscrupulously endeavours to obtain an advantage by means premeditatedly unjust.

In the variety *Pigeon* class, was exhibited one of the very best pens of *Spot Pigeons* we ever saw; in both their markings and condition they were unexceptionable. They were the property of C. A. Bowles, Esq., of 3, Mount Vernon, Chester.

YOUNG BIRDS.

GENERAL COMPETITION.

DORKINGS.—First and Second, Hon. H. W. Fitzwilliam, Rotherham. Commended, E. Shaw, Plas Wilmot, Oswestry.

SPANISH (Black).—First, M. Farrand, Dalt n, Huddersfield. Second, H. Beldon, Goltstock, Bingley. Commended, R. Davies, Chester.

GAME (Black-breasted Red).—First, J. Pennington, Birkenhead Park. Second, T. Burgess, Burleydam. Commended, Rev. W. J. Mellor, Colwick Rectory, Nottingham; J. Platt, Swanlow, Winsford.

GAME (Any colour).—First and Commended, J. Platt. Second, T. Burgess.

HAMBURGERS (Gold or Silver-spangled).—First, H. Pickles, jun., Earby, Skipton. Second, H. Beldon. Commended, I. Field, Dudley.

HAMBURGERS (Gold or Silver-pencilled).—First, H. Beldon. Second, W. Parr, Patricroft. Commended, P. Pitts, jun., Newport, Isle of Wight.

COCHIN-CHINA (Cinnamon or Buff).—First, C. W. Brierley, Middleton. Second, H. Gouldon, Bowdon.

COCHIN-CHINA (Any colour).—First and Second, E. Tudman, Whitcheurh.

BRAHMA POOTRA.—First, R. W. Boyle, Bray, Wicklow. Second, J. W. Harrison, Spalding. Commended, E. Leech, Rochdale.

ANY BREED.—First, H. Beldon. Second, Col. Stuart Wortley, Grove End Road, London (Houdans). Highly Commended, N. Cook, Chowbent (Houdans).

DUCKS (Aylesbury).—First, M. Farrand. Second, E. Leech. Highly Commended, J. W. Harrison.

DUCKS (Rouen).—First, E. Leech. Second, E. Tudman.

TURKEYS.—First, E. Leech. Second, Rev. J. W. Mellor. Commended, W. Palin, Stapleford Hall.

GEES.—First, E. Leech. Second, S. H. Stott, Rochdale. Highly Commended, G. R. Davies. Commended, T. Parker.

LOCAL COMPETITION.

DORKINGS (Coloured).—First, Earl Grosvenor Calveley Hall (Silver-Grey). Second, T. Rixby, Over (Grey.)

SPANISH.—First and Cap, J. Siddon, Winsford. Second, J. Dean, Wirral. Commended, R. Davis, Chester.

GAME (Black Red).—First, J. Heath, Nantwich. Second, J. Grocott, Haughton, Tarporley.
GAME (Brown Red).—First, T. Burgess. Second, R. Ashley, Nantwich. Highly Commended. — Stockton, Burwardsley. Commended, Messrs. Church & Houlding, Nantwich.
GAME (Any other variety).—First, R. Ashley. Second, Messrs. Church and Houlding.
COCHIN-CHINA (Buff or Cinnamon).—First, H. Gouldon, Bowdon (Buff). Second, T. Jones, jun., Neston (Buff).
BRAMA POOTRA (Dark).—First and Cup, C. Turner, Chester. Second, J. Little, Chester. Highly Commended, J. Statter, Liscard. Commended, E. Johnson, Liscard, near Birkenhead; J. Little.
POLISH (Any variety).—First, J. Heath, Nantwich (Silver). $\frac{2}{3}$ Second, Mrs. Brassey, Nantwich (Black).
HAMBURGS (Golden-spangled).—Prize, S. & R. Ashton, Mottram.
HAMBURGS (Golden-pencilled).—First and Second, Miss H. Walker, Ruthin. Commended, A. O. Walker, Chester.
BANTAMS (Any variety).—First, J. Statter, Liscard (Black Red). Second, T. Burgess (Black Red). Highly Commended, R. Ashley (Black Red). Commended, G. R. Davis, Knutsford (Black Red).
ANY OTHER VARIETY.—Prize, S. & R. Ashton (Black Hamburgs).
TURKEYS.—First, Miss H. F. Congreve, Burton, near Neston. Second, Earl Grosvenor.
DUCKS (Rouen).—First, Earl Grosvenor. Second, Miss H. Walker.
DUCKS (Any other variety).—Prize, J. Cheers, Barrow.

PIGEONS.

CARRIERS.—First, C. A. Bowles, Chester. Second, J. S. Skidmore, Nantwich.
POUTERS.—First, C. A. Bowles. Second, D. Thwaites, Rock Ferry.
TUMBLERS (Short-faced).—First, Second, and Highly Commended, T. Cawley, Tarporley.
DRAGONS.—First, H. Prince, Nantwich. Second and Commended, L. Glassy, Whitechurch.
BARDS.—First, S. & R. Ashton. Second, C. A. Bowles.
NUNS.—First, C. A. Bowles. Second, D. Thwaites. Commended, C. A. Bowles.
FANTAILS.—First and Second, J. Lowe, Chester. Commended, L. Glassy.
JACOBS.—First, L. Glassy. Second, C. A. Bowles.
TRUMPETERS.—First, D. Thwaites. Second, J. Lowe. Highly Commended, S. & R. Ashton. Commended, H. Prince.
OWLS (White).—First, L. Glassy. Second, D. Thwaites. Highly Commended, C. A. Bowles.
OWLS (Any other colour).—First and Second, C. A. Bowles.
TURBITS.—First, H. Prince. Second, L. Glassy. Commended, C. A. Bowles.
TUMBLERS (Balds or Beards).—First and Second, D. Thwaites.
TUMBLERS (Any other variety).—First, R. Davies, Chester (Rough-legged Yellow). Second and Commended, W. Denison, Chester (Birmingham Rollers, Red badged).
RUNTS.—First, C. A. Bowles. Second, Miss H. Walker.
ANY OTHER VARIETY.—First, C. A. Bowles (Spots). Second, Miss H. Walker (Archangels).
DOVES.—Prize, J. S. Skidmore, Nantwich.
EXTRA STOCK.—Commended, W. Gamon, Cheshire (Dun Carrier, and Black Carrier).

The Judges were Mr. Teebay, of Preston, and Mr. Hewitt, of Sparkbrook, Birmingham.

MORLEY POULTRY SHOW.

At this Show held on the 18th inst., the following prizes were awarded:—

SPANISH.—First, H. Beldon, Goitstock, Bingley. Second, J. Thresh, Bradford (In this class the first-price birds were moderate in quality, but bad in feather).
DORINGS.—First, J. White, Warlaby, Northallerton. Second, W. H. King, Rochdale. (Capital class for the locality, the winners being large and well-formed).
COCHIN-CHINA.—Cup, H. Beldon. Second, C. Sidgwick, Keighley. (A good class. The birds in the cup pen were of good quality and well matched).
BRAMA POOTRA.—First, E. Leech, Rochdale. Second, H. Beldon. (Rather poor in quality).
GAME (Black-breasted).—First, E. Aykroyd, Bradford. Second, A. Senior, Kirkburton. (A good class, the hen in the first-price pen being of extraordinary merit, and worthy of special mention).
GAME (Brown-breasted or other Reds).—Cup, E. Aykroyd. Second, C. W. Brierley, Middleton, Manchester. (The cup pen in this class was exceedingly fine and well worthy of the position).
GAME (Duckwings or other Greys and Blues).—First, S. Greenwood, Southwam, Halifax. Second, W. Fell, Adwalton. (This class only moderate in quality).
GAME (Any other variety).—First, J. Jennings, Halifax. Second, W. J. Mason, Leeds. (Very poor in all respects).
GAME COCKS (Any variety).—First, C. W. Brierley. Second, J. Fell. Third, W. J. Mason, Drighlington, Leeds. Fourth, J. Hodgson, Bradford. (A good class, and the winners well placed).
GAME HENS (Any variety).—First, W. Fell. Second, C. W. Brierley. (A large class, but very few good birds except the winners).
HAMBURGS (Golden-spangled).—First, H. Beldon. Second, J. White, Wakefield. (Some good birds in bad feather).
HAMBURGS (Silver-spangled).—First and Second, H. Robinson, Baildon. (Very good).
HAMBURGS (Golden-pencilled).—Cup, T. Wrigley, jun., Manchester. Second, S. Smith. (Good).
HAMBURGS (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, jun., Skipton. (A class containing some excellent birds).
HAMBURGS (Black).—First, H. Beldon. Second, C. Sidgwick, Keighley. (The first-price cockerel an extraordinary bird, and perfect).
ANY BREED NOT MENTIONED ABOVE.—First, H. Beldon (Polands). Second, Col. Stuart Wortley, Grove End Road, London (Crève Cœur).
GAME BANTAMS.—First, J. J. Cousins, Leeds. Second, S. Binns, Kirkburton. (Only poor in quality).

BANTAMS (White).—First, S. & R. Ashton, Mottram, Cheshire. Second, J. R. Jessop, Hull. (Very good).
BANTAMS (Black).—First, T. C. Harrison. Second, Mrs. Stannton, Dublin. (Very good).
BANTAMS (Any other variety).—First, T. C. Harrison. Second, T. Burgess, Brighouse. (Good).
SELLING CLASS.—First, W. J. Mason. Second, M. Scott, Leeds (Brahma Pootra).
GEES.—First and Cup, E. Leech. Second, R. Bentley, Bawtry.
DUCKS (Rouen).—First, E. Leech, Rochdale. Second, J. Dixon, Bradford. (A good class).
DUCKS (Aylesbury).—First, E. Leech. Second, L. J. Crossley, Halifax.
DUCKS (Any other variety).—First and Second, J. Dixon (Carolinas and Shell Ducks).

PIGEONS.

CARRIERS.—First, E. Horner, Harewood, Leeds. Second, J. Firth, jun., Webster Hill, Dewsbury. (The winning pens good).
OWLS.—First, E. Horner. Second, J. Crisland, Paddock. (Good, but no bad feather).
TURBITS.—First, P. Waite, Sparkbrook, Birmingham. Second, E. Horner. (A very good class; the winners very fine).
BARDS.—First and Second, J. Firth, jun. (There were some good short broad-skulled birds).
TUMBLERS.—First, E. Brown, Sheffield. Second, H. Yardley, Birmingham.
FANTAILS.—First, E. Horner. Second, H. Yardley. (Moderate).
POUTERS.—First, J. Crisland, Paddock. Second, H. Beldon, Bingley. (Large and long).
NUNS.—First, J. Thompson, Bingley. Second, H. Yardley. (Poor, except the first-price pen).
JACOBS.—First and Second, E. Horner. (Very good).
TRUMPETERS.—First, J. Firth, jun. Second, J. Crisland.
ANY OTHER VARIETY.—First, M. Gray, Eorroughbridge. Second, H. Yardley.
JUDGES.—Mr. James Fielding, Newchurch, Rossendale; Mr. J. W. Thompson, St. Ann's, Halifax.

CROOK POULTRY SHOW.

(From a Correspondent.)

THIS was held on the 11th inst., and proved in every respect better than any previous Exhibition of this Society. As year by year the Society continues to increase the amount of prizes, so do the quality and quantity of the poultry increase.

The following is a list of the awards:—

GAME (Black and other Reds).—First, J. Wilson, Tadhoe. Second, R. Carlton.
GAME (Other breeds).—First, J. Potts. Second, G. Braithwaite.
SPANISH.—First, J. Graham. Second, Mrs. Sanderson.
DORING.—First, D. Rutter. Second, J. Graham.
POLANDS.—First, W. Lawrenson, Eaglescliffe. Second, — Collinson.
COCHIN-CHINA.—First and Second, G. H. Procter, Durham.
HAMBURGH (Golden-pencilled).—First, J. Wilson. Second, M. Ridley, Frosterley.
HAMBURGH (Silver-pencilled).—First, J. Wilson. Second, W. Whitfield. Highly Commended, W. Lawrenson.
HAMBURGH (Golden-spangled).—First, R. Pickering. Second, W. Smurthwaite.
HAMBURGH (Silver-spangled).—First and Second, D. Rutter, Hetton.
BANTAMS.—First and Second, H. Pickering, Tow Law.
GEES.—First, M. Heslop, Hamsterley. Second, T. V. Johnson, Frosterley.
DUCKS (Aylesbury).—First, S. Sanderson, Bradley Hall. Second, W. Whitfield, Hetton.
DUCKS (Any other breed).—First, Miss Lang. Second, W. Whitfield.
 Mr. Benson, of Darlington, was the Judge.

WOODSTOCK AGRICULTURAL AND HORTICULTURAL SOCIETY.

THE annual Show of this Society took place on the 17th inst., and passed off most successfully. The weather on the whole was beautifully fine, and in addition to the attractions of the Show, the Duke of Marlborough, with his usual kindness on these occasions, threw open the magnificent grounds and gardens of Blenheim Palace to the visitors, where they were allowed to roam without hindrance.

We cannot spare space for details in all the departments, but we must observe, in the horticultural section, that the largest collection was sent by the Rev. G. W. St. John, which occupied the greater portion of the central table. This collection comprised Fenn's Alliance Hive, several glasses of honey, beer manufactured from the honeycomb, shoe-dubbing and furniture-cleaning from the wax; a collection of Heliotropes, Fuchsias, Oleanders, Pelargoniums, Grapes, Plants in pots and baskets, and Cherries, all grown in two small greenhouses, 4 feet wide by 12 long. A large collection of Potatoes grown on the ridge-and-bank system, last year's crop and the present being shown together in the same basket. An assortment of wines made from the produce of the garden, consisting of Rhubarb, Gooseberries, Royal Muscadine and Esperione Grapes, all made without spirituous liquors. Some interest was created by the competition between Mr. Fenn, of Woodstock; and Mr. Stewart, of Nuneham, for the best twelve sorts of Potatoes, six of each sort. All the specimens were extremely fine, but the Judges, Mr. Morris and Mr. Betteridge, awarded the prize to Mr. Fenn.

The Show of poultry was, if not quite so large as usual, quite equal

in point of quality. This was especially the case as regards the Spangled Hamburgs, the Dorkings, the Brahmas, and the Ducks and Geese. The prizes offered for the best pens were awarded to the Duchess of Marlborough and the Rev. F. S. Dodd.

The following is a list of the awards:—

DORKINGS.—*Chickens*.—First and Second, Duchess of Marlborough.
 BRAHMA POOTHAS.—*Chickens*.—First and Second, Duchess of Marlborough.
 COCHIN-CHINA.—*Chickens*.—First, Rev. F. S. Dodd. Second, R. H. Hurman.
 HAMBURGH (Spangled).—Prize, R. H. Hurman. *Chickens*.—Prize, R. H. Hurman.
 HAMBURGH (Pencilled).—First, —James. Second, —Aries. *Chickens*.—Prize, —Aries.
 GAME.—First, —Hutt. Second, W. Pratt. *Chickens*.—Prize, —Hutt.
 GESE (White).—*Geese*.—Prize, —Hutt.
 GESE (Grey).—First, Duchess of Marlborough. Second, H. L. Gaskell.
 GOULINGS.—Prize, —Lester.
 DUCKS (Aylesbury).—Prize, Duchess of Marlborough. *Ducklings*.—Prize, Duchess of Marlborough.
 DUCKS (Coloured).—Prize, —Hutt. *Ducklings*.—First, —Hutt. Second, W. Pratt.
 TURKEYS (Black).—First, H. L. Gaskell. Second, Duchess of Marlborough. *Poult*.—First, H. L. Gaskell. Second, Duchess of Marlborough.
 TURKEYS (Grey).—Prize, Duchess of Marlborough. *Poult*.—Prize, Duchess of Marlborough.
 CHAMPION PRIZES (Offered by W. M. Foster-Mellor, Esq., President, for the best pen of poultry, bred in 1867, exhibited in either class).—First, Duchess of Marlborough. Second, Rev. F. S. Dodd.
 JOOE.—Mr. Botham, Slough.—(*Oxford Gazette*.)

FARNWORTH (NEAR WARRINGTON) POULTRY SHOW.

THE third annual Show was held on the 12th of September. The entries amounted to nearly 250, and among the exhibitors were many of our principal breeders. Subjoined are the awards of the Judges, who were Mr. R. Tebbay, Fulwood, near Preston, and Mr. Joseph Hindson, Barton House, Everton.

GAME (Black-breasted Red).—First, Duke of Newcastle, Clanthor. Second, J. Jackson, Bury. Third, E. H. Woodcock, Wigan. Highly Commended, J. Chorlton, Wakefield.

GAME (Brown-breasted Red).—Cup and Second, J. Wood, Wigan. Third, J. Jackson.

GAME (Any other variety).—First and Second, J. Halsall, Wigan. Third, G. C. Furness, Accrington.

SINGLE GAME COCKEREL.—First, J. Wood. Second, Rev. W. J. Mellor, Colwick Rectory, Notts. Third, Duke of Newcastle.

DORKINGS.—Cup, Duke of Newcastle. Second, Hon. H. W. Fitzwilliam, Third, E. Cople, Prescot. Highly Commended, Hon. H. W. Fitzwilliam.

SPANGLED.—Cup and Second, M. Ferrand, Dalton. Third and Highly Commended, F. James, Peckham.

COCHIN-CHINA (Cinnamon or Buff).—Cup, C. W. Brierley, Middleton. Second and Highly Commended, W. A. Taylor, Manchester. Third, G. Fell, Warrington.

COCHIN-CHINA (Partridge-feather or any other variety).—First and Third, and Highly Commended, E. Tadman, Whitechurch. Second, J. R. Rodhard, Winton, Bristol.

HAMBURG (Golden-pencilled).—First and Third, T. Wrigley, Middleton. Second, H. Pickles, Skipton.

HAMBURG (Golden-spangled).—First, J. Chadderton, Hollinwood. Second, T. Walker, Manchester. Third, T. Scholes, Hollinwood. Highly Commended, N. Marlor.

HAMBURG (Silver-pencilled).—First and Second, W. J. Boistow, Bingley. Third, H. Pickles.

HAMBURG (Silver-spangled).—Cup, H. Pickles. Second, J. Jackson, Bury. Third, J. Fielding, Manchester.

POLANDS.—First, R. Charlesworth. Second and Third, P. Unsworth, Lorton.

BRAHMA POOTRA (Any colour).—Cup, R. W. Boyle, Bray. Second and Third, H. Lacy, Hebban Bridge. Highly Commended, Hon. E. D. Pennant, Bangor; J. Statter, Liscard.

BANTAMS.—Cup and Second, J. W. Morris, Rochdale. Third, J. D. Newsome, Batley. Highly Commended, J. Crosland, Wakefield.

BANTAMS (Any breed).—First, S. & B. Ashton, Mottram. Second, T. C. Harrison, Hul. Third, W. A. Taylor.

BANTAMS (Single Game Cockerel, any colour).—Cup and Second, J. W. Morris. Third, J. Crosland. Highly Commended, J. Holland, Manchester.

ANY OTHER DISTINCT VARIETY.—First, Duke of Newcastle (Houdans). Second, S. A. Wyllie (La Fève). Third, N. Cook, Clowvent (Houdans).

SELLING CLASS.—First, W. A. Taylor. Second, G. H. Roberts, Preston. Third, J. Houghton.

DUCKS (Rouen).—First and Second, E. Leech. Third, T. Houlker, Revidge. Highly Commended, E. Longton.

DUCKS (Aylesbury).—First, Second, and Highly Commended, Mrs. M. Seamons, Hartwell, Aylesbury. Third, E. Leech.

DUCKS (Any other variety).—Lieut.-Col. Mather, Penketh (Call Ducks). Second and Third, C. W. Brierley. Highly Commended, F. Longton.

GESE.—First, T. Houlker. Second, Mrs. M. Seamons. Third, J. Hough, Northenden. Highly Commended, S. H. Stott, Rochdale.

TURKEYS.—First, E. Leech. Second, T. Houlker.

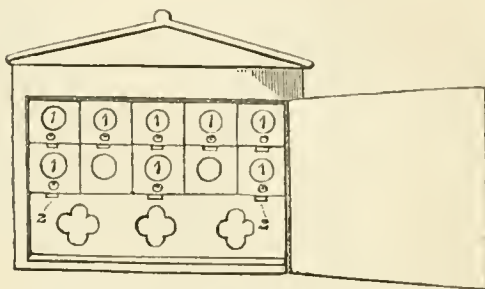
AWARDING PRIZES FOR HONEY IN SUPERS.

THERE was a prize given for "the best glass of honey" at a recent horticultural show in this neighbourhood. (1) Small glass weighing 4 lbs., including the glass, quite full, cells sealed up, of a bright golden colour, and no bees in it, and bell-shaped.

(2) A flat-topped glass, weighing 15 lbs., including glass, comb down to the bottom, half the comb full of honey with comb sealed up, very little honey in the remaining comb, much lighter colour than the above; no bees in it. (3) A flat-topped glass, weighing 19 lbs., including glass; comb three parts down, half of which was filled with honey, white colour nearly; about three hundred bees in it. If you would say to which the first prize ought to be given, also the second prize, you will greatly oblige. —MINTLYN.

[It is impossible to judge snipers without seeing them. Any opinion which we might form from description only must therefore be entirely worthless.]

GALE'S HIVE.



THE above is a back view of the hive when the door of the outer case is opened. The lowest part, with the three four-lobed windows, and the two round windows unmarked with the figure 1, is the hive. The eight drawers marked with the figure 1, are 4 inches square, and 12 inches long. The circles represent windows glazed at their ends. These drawers communicate with the hive by a slit in their lowest side, which slit is closed or opened by means of the eight zinc slides, two of which are indicated by the figure 2.

When the drawer is full, communication with the hive must be cut off. Then pass a piece of zinc under the drawer to keep the bees in that are in it. The drawer and contents may then be removed to some shady spot, and on the zinc being removed the bees will fly home and leave the honey.

There is an outer case to the hive to protect it from the weather, and three entrances in front.

We are informed that from one of these hives, Alfred Crowley, Esq., of Bramley Oaks, near Croydon, took 56 lbs. of honey last year.

APIARIAN NOTES, 1867.

A WET afternoon impels me to sit down and scribble a few remarks upon my favourite hobby, as it has worked itself this ever-memorable year in the annals of bee-keeping. I have before me the notes of "A BLACKHEATH'N," at page 208, and can endorse to the letter his verdict on the disastrous nature of things in respect to bees this year. In 1861 we had a very bad year, I never knew a worse at that time; but 1867 has proved hitherto far worse, and if bee-keepers do not look out and feed liberally, it will go hard with them in the coming winter and spring. I have just come in from driving a Ligurian stock, which I fed moderately during the spring (not liberally, alas!), even up to June, and was annoyed to find scarcely half a pound of honey in the hive, hardly any fresh comb constructed, and only half the usual quantity of bees. I have the queen a prisoner, and cannot detect any sign of feebleness in her. She is a beautifully-marked Italian, and (if not a young queen born this or last year unknown to me), is the identical queen supplied by Mr. Woodbury, when I first set eyes on this beautiful species. As she has not bred pure Italian queens, although beautifully marked herself, I shall destroy her, and strengthen a weak Italian stock by adding the driven bees to it.

I began the year with sixteen stocks, all in excellent condition; some of them were very strong in bees and honey. Every one knows how unpropitious the weather was, with much rain and snow and frost, and little sun. Hence no wonder the bees suffered. First, the brood perished again and again in the

rapid and excessive alternations of weather. Then their stores rapidly decreased, while, even in fine weather, they failed to find food enough even to keep the population up to the mark. In fact, the flowers contained no honey. Hence multitudes never returned home at all. They were starved to death in the fields, and among the flowers. To keep feeding so many stocks was out of the question. With the exception of about half a dozen, the rest were left to their fate. The result was that two hives perished of starvation in May; but this was before I had found out how matters stood. Of the remainder, one of the weakest became the strongest, and gave me 12 lbs. of honey-comb in a super. This was the Italian stock "D," in my bee-house, as given in the last report of my apiary. The strongest of all gave me 4 lbs., also in a super. From this stock (Tasmanian), I also took about 12 lbs. in August, when I broke it up, the bees being saved and joined to another hive. At present this is all my honey harvest for the year, plus the half pound just taken out of the straw hive. Of my remaining stocks I think there are six sufficiently well provided to outlast the winter without feeding. The rest I must feed up, which, in fact, I have commenced doing.

So far as I know, I have not had a single swarm, although I have reason to fear that one of my purest Italians has gone off unsuspected. This is "A" in my bee-house. The hive had been so feeble all the summer, that I never dreamt of such an occurrence till piping was accidentally heard. This was quite at the end of July. Of course something may have happened to the old queen. Availing myself of the presence of so many young queens, I destroyed the queens of two other hives, and gave them live queens or royal cells instead. These seem to be doing well. There being plenty of Italian drones in several hives, I drove my second pure Italian stock "E" at the same time, compelling the bees to rear artificial queens. In due time I cut out several royal cells, and Italianised another of my own stocks, "C," and one belonging to a neighbour. The young queen of one of the latter stocks (my own), is breeding very fast, quickened by the liberal supply of food now being given to the hive.

Thus my bee-house is filled with pure Italian queens, six of them, and as there were quantities of Italian drones, and scarcely an English drone in my apiary, I feel very hopeful that I have at length succeeded in establishing this breed in permanency. But of this I shall have more to speak anon.

To revert to the recent honey harvest. I remarked in one of the recent numbers of this Journal, what one of your correspondents said about *honeydew*. I, too, again, after the lapse of some years (so far as I can recollect), have seen my own bees collect it from the leaves of a sycamore tree in my garden, also from a cob-nut in the same locality. For three days the bees were very busy about it; some fifty or one hundred bees at a time might have been seen flitting and buzzing about these two trees for several hours each day. There were other sycamores and nuts in the garden, with an abundance of honeydew upon them, apparently the same as that on the aforementioned trees, but the bees took little or no notice of it. Doubtless, there was something in the condition of those particular trees which led them to be visited with assiduity; but I find here only a corroboration of an opinion I have long held on this subject, different from that of your correspondent. He thinks that our main supply of honey comes from honeydew. My conviction on the contrary is, that while, doubtless, at times, more in some years than in others, especially when, as recently, bees are half starved, they will gather the honeydew (so called), still it is only when flowers are scarce, or barren of honey, that they will take notice of it. How few are there who can tell us of bees actually seen in large numbers on other than rare occasions collecting honeydew; whereas, everybody knows how they throng the apple trees when in bloom, not to speak of our other garden trees and shrubs, and how they frequent a bean field, or a field of buckwheat, or white clover in bloom, and with what result. These are the times when our caps and supers fill, whereas, I never yet have been aware of the gain of a single pound of honey from honeydew.—B. & W.

OUR LETTER BOX.

BREEDING GAME FOWLS (Lancashire).—In our last volume, the twelfth, there is a series of communications which apply fully to exhibition birds as well as to fighting birds.

DOINKING CHICKEN (P. B. F.).—If it be cramp—but of which we can form no judgment, as you do not mention any symptom—you had better feed it generously, giving bread soaked in ale daily.

WHAT ARE CONSIDERED CHICKENS AT EXHIBITIONS? (J. L. W.).—Birds hatched in the year are considered chickens for purposes of exhibition. Their age is not reckoned by months, nor is there any limited age. Chickens hatched on the 1st of January are eligible to show in chicken classes at Birmingham.

DUCK MANAGEMENT (Bang).—The food of Ducks and ducklings, and their digestive powers seem to be of that happy character, so easy to find and so effectual when found, that we seldom expect to have much to say about them. We do not believe much in their weakness, unless they are improperly lodged or fed. No lodging is fit for them that has a brick, stone, or wooden floor. Either will produce cramp, and that will cause the staggering you speak of. Dry food is not good for them, nor is scrupulously clean food desirable. If they are kept tolerably clean, then add to their food a sod of grass put in the water. Give them oats, oatmeal, lettuces, and if you want them to grow and fatten quickly, any scraps of raw meat you may have.

SECURING A HAWK (H. H.).—You will have no difficulty in securing your Hawk. Take a piece of soft leather half an inch wide. Slit it like a button-hole at one end, pass the other end through the slit, and then having drawn it sufficiently tight round the leg, fasten the chain to the end of the strap. It will be perfectly secure, and will never hurt the bird. If you wish to keep any bird of prey healthy, you must be careful to feed on food either with the pelt or feathers on, wherever they may form their castings. It is a condition of their health that they should throw them up.

ROUEN DUCKS' BEAKS (H. C.).—The beaks of Rouen Ducks should be the counterpart of those of the Wild Duck; the drake's of a greenish-yellow, the Duck's dark ash-colour, or brown in the centre, with yellow marks at its base and extremity, extending in some cases in a narrow edge almost from one end to the other.

GUELDBRE FOWL (Idem).—This is a large up-standing bird, in shape very like the La Fleche, but not not in comb. It has a curiously-shaped nostril, and is Cuckoo-coloured. In France, whence the few in England have been imported, they rank, we think deservedly, below the Houdan, La Fleche, and Crève Cœur, either as layers or as table fowls.

FEATHER-EATING PHEASANTS (Guendoline).—Your Pheasants first eat their feathers from disordered bodies, and continue to do so, either from mischief or because they like it. You have, no doubt, over-fed them, hence little bodily ailments. They do not over-feed when they are at liberty, but if they do, Nature has taught them what to eat and where to find it. It is not at hand in your pheasantry, but as they are very nice-hungry and must have something, they eat feathers. Just so, doctors say when children get out of order at school, they eat slate pencil, sealing-wax, string, paper, indiarubber, and so on. We know not what you have given, and cannot, therefore, give an opinion about it; but we can tell you what you ought to give, and you can draw your own conclusions. Whole barley four days per week, Indian corn three days; barley or oatmeal shaken with water once or twice per week as a change; some brick-layers' rubbish, old ceilings, mortar, &c., always within reach. If the pheasantry affords no grass they must have large sods of growing grass, cut with lots of earth, thrown into their pen. Lettuces are among the best remedies for eating feathers, as their influence is cooling. Keep plenty of clean water always by them. Fruit is excellent for them. Let bread be given as a luxury by yourself when you visit them, but in small quantities. For the present and while they are as it were under treatment, add to the above a goodly allowance of ripe blackberries every day.

CHICKENS DROOPING (Somersetshire).—Your chickens are suffering from chill, or from roup, or from some weakness. When they are first attacked they should be freely fed with bread steeped in strong ale; afterwards, both for cure and prevention, put citrate of iron or camphor in their water. The use of these two remedies will be found to save trouble, anxiety, and loss. Your fowls must have a grass run, and should be fed principally on soft food. Change of air, food, water, and, above all, of roosting, will often affect poultry.

LADY HOLMESDALE'S POULTRY (T. B.).—We cannot say whether they will be sold by private contract or by auction. They will be advertised.

HOUDANS' LEGS (J. H.).—The legs of Houdan fowls should be black and white speckled. They should be five-clawed, but must not be feathered.

CHITTEPRATS (—).—Chitteprat is a north-country name for Silver-pencilled Hamburgs.

PIGEONS DISEASED (J. O.).—The disease your Pigeons are suffering from is highly contagious, therefore at once separate the healthy from the ailing. This complaint usually kills young birds. Remove the matter with a small piece of wood, a knife would be too sharp, and then apply caustic to the place. Cleanse the Pigeon-house thoroughly. Continue to vary the food, but give them young lettuces to eat; for, as the impurity of blood is the cause of the complaint, green food is sure to do good.

BULLFINCH FEATHERLESS (A Lover of Birds).—Your Bullfinch, we fancy, must be infested by some kind of vermin. Save all the ashes of cigars or tobacco, and well powder the little fellow all over, and change his cage in case the lice or other insects should be in it. A good wash of benzine on the cage would clean it, and destroy the vermin if there are any. If gas is burnt in the room, and the cage hangs within 2 feet of the ceiling, this would cause the feathers to fall off and prevent the young ones growing; loss of feathers also frequently occurs for want of change of food. When too much hempseed is given an irritation of the skin is produced, which causes the bird to pluck its own feathers.

POULTRY MARKET.—SEPTEMBER 25.

THE supply of all sorts of poultry is very small, and were it not that there is little or no demand, the price would be very high for the time of year.

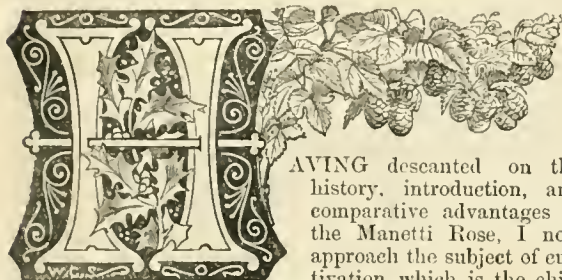
	s.	d.		s.	d.
Large Fowls.....	3	0 to 3	6	Pheasants	0 0 to 0 0
Smaller do.	2	6	3 0	Partridges (young) ..	1 9 2 0
Chickens	1	6	1 0	Grouse	2 6 3 0
Geese	6	0	9 0	Guinea Fowls.....	0 0 0 0
Ducklings	1	9	2 0	Rabbits.....	1 5 1 6
Pigeons	0	8	0 9	Wild do.....	0 8 0 9

WEEKLY CALENDAR.

Day of Month	Day of Week	OCTOBER 3—9, 1897.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.	
			Day.	Night.	Mean		Days.	m.	h.	m.	h.	m.	h.	m.				h.
3	Tu	Royal Horticultural Society, Promenade. 16 SUNDAY AFTER TRINITY. Twilight ends, 7h. 15m. P.M.	63.8	44.1	53.9	16	5	af 6	31	af 5	46	af 11	49	af 8	6	10	52	276
4	F		64.2	42.8	53.5	19	7	6	31	5	after.	33	9	7	11	10	277	
5	S		63.3	40.3	51.8	19	8	6	29	5	24	1	22	10	7	11	28	278
6	SUN		62.1	43.2	52.7	21	10	6	27	5	10	2	16	11	9	11	46	279
7	M		68.8	44.1	53.9	20	12	6	25	5	46	2	morn.	10	12	3	280	
8	Tu		61.7	42.4	52.0	21	13	6	23	5	18	3	15	0	11	12	29	281
9	W		60.8	42.5	52.7	23	15	6	20	5	48	3	18	1	12	13	37	282

From observations taken near London during the last forty years, the average day temperature of the week is 62.8°; and its night temperature 42.8°. The greatest heat was 80°, on the 4th, 1859; and the lowest cold 23°, on the 5th, 1850; 8th, 1852; and 9th, 1849. The greatest fall of rain was 1.06 inch.

CULTURE OF ROSES ON THE MANETTI STOCK.—No. 2.



HAVING descanted on the history, introduction, and comparative advantages of the Manetti Rose, I now approach the subject of cultivation, which is the chief

object of this dissertation. I will endeavour to be as concise as I can consistently with efficiency, and to avoid the reproof of Addison, "Some men's ideas are lost, like some fruits, in the superabundance of foliage."

SOIL.

Any soil will do for Manetti Roses, if a sufficiency of manure is added to it according to its quality. If I were to make a soil suitable for Roses generally, I would mix and pound up in a mortar in equal parts stiff unctuous clay, sand to keep it open, and decayed manure. If no sand or ashes were used, unfermented manure would be better than that which is decayed, because the former by fermentation would open, and keep open, the soil better. If the land were sandy, chalky, or gravelly, I would use decayed manure. Cow-manure is good for Roses, especially in hot land. Clay or loam is essential for some Roses, and without it they will do nothing, or flourish only for a short time. I could do nothing at Rushton with Madame Rivers and Madame Vidot for lack of clay, but in the strong sandy loam at Okeford Fitzpaine they have bloomed superbly, and as fast as Jules Margottin. I may say, in passing, that I have seen no light Rose to approach them for beauty and perfection, except Miss Ingram, which is whiter than Madame Rivers, the forms of both being the same, either globular or flattened spheroidal, like the planet Saturn. There is no land so poor that it cannot be made good enough for Manetti Roses generally.

ADAPTATION OF ROSES TO THE STOCK.

This stock is not, as I have before intimated, suited to dwarf growers or slow growers. Such do not take up the sap quickly enough, and hence it is forced back on the stock in a crude state, and also causes the stock to emit suckers, which must be at once removed. Strong growers with bold healthy foliage are the only Roses adapted to the stock. Such Roses as Madame Furtado and Colonel de Rougemont, which succeed badly upon any stock, do worse upon this. It is curious, but true, that Roses which do but indifferently on any stock will sometimes do altogether well on their own roots, and *vice versa*. Louis XIV. is a bad grower on either the Manetti or the Briar, but it grows well and blooms abundantly when it is on its own roots.

SELECTION OF ROSES.

However good a selection of Roses may be, "novelties" No. 340.—VOL. XIII. NEW SERIES.

will supersede some of them slowly. I say slowly; for, with the exception of Maurice Bernardin's year, which was the most prolific in good Roses that I remember, not more, perhaps, than from three to five per annum can be called varieties, or Roses that should stay in a select catalogue for any length of time. I believe the best thing the inexperienced can do is to go to a nurseryman's Rose garden, and see them in the season of blooming, making some allowance for the superiority of the soil; and the next best plan is to deal with respectable men, and tell them what are your circumstances and wishes, and I believe they will do their best to gratify you and retain your custom. Deal with the man that serves you best, true to sort, and charges the most moderate price. Catalogues generally are too long; they only bewilder. As, however, tastes differ, as well as soils and circumstances, the catalogues should not be cut too short.

PREPARATION FOR PLANTING, AND PLANTING.

Have your holes dug, your manure put in, your stakes erected to tie to, and your bast cut to a proper length, so as to put your Roses in as soon as you can on arrival. A little water should be poured into the hole, if the soil is dry (and it can never be too dry for planting, because you can tread firmly without smearing—Nature never was a bricklayer), which will make a grateful puddle. Having done this, plant them as fast as you can, for the less the roots are dried the better.

It requires two persons to plant well. One should spread out the roots after they have been cut to the general radins, and hold the tree steadily, and the other should lift the earth up in the spade, and drop it (not shovel it in like a sexton), carefully on the roots so as not to double them back. The earth should reach to two inches over the point of union and be firmly trodden. The plant should then be tied to a stake. I use for this purpose hurdle stakes, which cost, carriage included, £4 3s. per 1000; these will last four or five years, or more. When they rot, they may and should be fresh pointed, as rotten wood fosters fungus. The plants should be planted with their roots in one direction, and then when water is scarce you will know where to apply it most advantageously.

It is essential to tie all kinds of Rose plants to a stake, especially grafted plants, as the wind will greatly disturb the point of union, and probably break the Rose off. Should the point of union be disturbed by wind or travel, if it is not entirely broken off, tie bast firmly round the disturbed place, and tie the tree to the stake so firmly that it cannot be moved by wind, and it will quickly unite again. When you dig up Roses do not let the man dig and pull; he will break the plants off at the point of union. It requires two persons to perform this operation. Frequently on arrival we find the plants broken at the point of union: this occurs from the packer drawing a Willow band close over the point of union as hard as he can with the foot on the bundle.

Whether plants are just received, or removed, you should always look for eyes in the stock, and cut them out.

When the Roses are planted, dry mulching in winter, and wet mulching in summer, greatly help them. Do not cut

the Roses at planting-time; let them die back, and you will see by the freshening eyes where to cut. In a word, let the sap flow before you cut.

SITUATION OF THE ROSERY.

Where a situation can be selected, one with a south aspect, a dead flat, well-drained, and airy but not windy, is the best. Even a windy situation is preferable to a close place, so conducive to fungoid diseases, especially in August and September. Wind, however, if sufficiently violent to bruise all the leaves simultaneously, is very injurious. Destruction of the leaves, or the stoppage of their pores by dust, soot, or fungus of any kind, will damage the trees as much as wind that bruises the foliage, for they all act as the lungs of the plant. The generality of Rose growers are obliged to submit to situation instead of being able to select one.

The best situation for pot novelties is not, as is generally supposed, a hot south wall, where fungus is sure to appear, but an open space protected from violent winds. I have raised some of my finest Manetti Roses from pot novelties on raised banks, such as Thorn hedges are planted on. The banks ran north and south, so that the sun at rising affected one side of the bank, the midday sun the surface, and the setting sun the other side, thus acting as a forcing-house out of doors, with the benefit of a free current of air, for want of which so many forced things are spoilt. On arrival I wash with blue vitriol and water the house-raised novelties; as, though I cannot always see fungus on them, I suspect it to be there, or that the Rose is in a state predisposing it to fungus, which is not created by the atmosphere, but is dependant upon atmospheric conditions for its development.

DROUGHT AND EXCESSIVE MOISTURE.

Both of these extremes are drawbacks to Rose-growing. The former may be cured by plenty of pumps and willing pumpers, the latter by drainage. The gardens of our great people are generally very deficient in water supply. The same may be said of smaller gardens. Gardening cannot be effectually carried on without free access at all times to water. It is impossible to cultivate Roses successfully, and keep them healthy, unless there is free access to plenty of water. The health of the foliage, in other words, the health of the trees, which here surprised "D.," and surprises hosts of visitors, is mainly owing to free drainage, frequently stirring the surface soil, and affording plentiful supplies of water, in hot dry weather especially, both for the roots and leaves, which answer to each other as face answers to face in a mirror. Stirring the ground constantly is a great secret. It should be done deeply between the rows, and lightly over the roots. By so doing less water is required to touch "all the points of the roots," and the night dews, which are in the same ratio as solar heat, are more easily admitted. The exhausting powers of the sun and the copiousness of night dews are little understood. The roots, no less than the leaves, require air. It is absolutely necessary, especially in the vicinity of towns and dusty roads, to wash the leaves of Roses: unless these are kept clean, and the stomates of the leaves kept open, the tree cannot breathe, and the precious gases of the atmosphere cannot enter to act on the sap which rises to the axils of the leaves for purification. A great poet has said, "Water is the best thing:" in gardening it is an essential thing.

As regards an excess of moisture, it seldom arises from the cultivator's supply, but in strong lands it will occur in some seasons, unless the ground is drained. No drainage is worth anything unless the drains are at least 3 feet 6 inches deep. I have drained two of my gardens here, causing the drains to flow into my pump well. The pump, bricks, oak crib, and labour only cost me £10. I have another pump on the place, and a little pond into which flowing water continually runs. I think of putting up one or two more pumps. Water may be supplied to the leaves by syringing or simply pouring it from a water-pot.—W. F. RADCLIFFE.

(To be continued.)

GRAPE JUDGING.

Looking at the various aspects of this question, and the mere opinions which are being advanced concerning it, it appears more and more desirable that an attempt should be made to settle it in something like a practical manner. To me it seems quite evident that even very eminent growers may continue to advance opinions as to the relative merits of mere

colour and flavour, as well as the relation these qualities bear to each other, without arriving at any tangible or useful conclusion.

Viewing the controversy from this stand-point, it will not be expected that I should here throw in my opinion to add to the clash of arms which has taken place already; although I may remark in passing on to my present object, that under ordinary circumstances I see no particular difficulty in the way of an experienced cultivator producing in a house of Black Hamburgs a black and a brown shade of colour in the Grapes borne by different Vines, and that it is to be feared mere sweetness is often accepted by some palates for that vinous flavour which a properly trained palate requires in a Black Hamburg Grape. I think few classes of Grape-consumers are so trustworthy in forming a correct conclusion as our nobility and gentry, who have been accustomed all their days to the correct flavours of things in general. It is with them something approaching to a science. Certainly I consider that the opinion of this class of the community should go a great deal further in this matter than that of many others who consume fruits which are valued more for a stare than anything else.

But to come to my present object. I would suggest that the Fruit Committee of the Royal Horticultural Society should take the matter in hand, and invite growers to send to the meetings in 1868—say from June till October—samples of what they consider their best and properly flavoured Grapes. This—admitting that the Committee are a reliable conclave—would at least test the relation which colour bears to thickness of skin and real Grape flavour. I feel confident that, if this course were adopted, the Committee would be liberally supported by growers in their endeavour to settle whether it be necessary and desirable to taste Grapes in order to decide their merits. It certainly appears to me a little absurd to prefer mere colour to flavour in any production the chief end of which is to be eaten; and amid the multitude of opinions which are being advanced, it would be most interesting that an appeal should be made in this practical form for a few months in succession, before any set of rules should be drawn up for the guidance of growers and judges.—D. Thomson, *Archerfield Gardens*.

TRANSPLANTING WELLINGTONIA GIGANTEA AND CUPRESSUS LAWSONIANA.

I AM glad that the subject of planting trees and shrubs has been again brought before the readers of this Journal, by various writers who have described their practice or views; and equally acceptable with accounts of success are the details of failures, for these serve as warnings as to what to avoid. Now, the planting of shrubs and trees is not unfrequently done at times when the operator knows to be hazardous, but circumstances compel it to be done at such times, and now and then we have heard some planters boast of their success almost as soon as the tree was fixed in its new position, as if the removal of a tree from one place to another was only a mechanical undertaking, irrespective of all harm the roots might receive in the operation. Indeed, I have sometimes been told to look at the neatly-arranged turf around the stem of the newly-planted tree, and been asked to bear witness how little harm the top had undergone by the change, very soon after that change had taken place, and long before it was possible to see what would follow; for a large tree or shrub when transplanted at the most suitable time, does not show the effects of its removal to any considerable extent for some while, but by-and-by the damage done is perceptible enough. Now, I am not certain that the best possible time to transplant each kind of shrub or tree is known as yet, for certainly there is a difference in the results attending the planting on the same day of two kinds of shrubs that appear to have a certain degree of affinity; and I will now mention the case of two species of trees planted and treated alike, and describe the results.

In the autumn of 1863 I obtained a batch of upwards of two hundred Wellingtonias in thumb and 60-sized pots. Scarcely any of the plants were more than 6 inches high, and many less. I had also a more numerous lot of Cupressus Lawsoniana of the same size. Both these lots of plants I turned out carefully and planted them in nursery-rows on a plot of rather light land on which a crop of Potatoes had been grown. Taking care to unfold the roots carefully and spread them out to their fullest extent, which was easily done with plants so small. This was in the middle of October, and although the winter was

mild, the little plants did not look over-comfortable until they began to grow in the ensuing summer, and that not very early either, but scarcely one died, and by the end of autumn they were neat little plants. Not having occasion for them then, they remained another year, and by the autumn of 1865 they fully averaged a height of 4 feet, and many of them were taller and proportionately bulky. It was not, however, until about Christmas that a site for a part of the Wellingtonias was prepared, but all were taken up, Cupressus as well, and early in January a part of the Wellingtonias were planted out where they were finally to remain. The rest were put into nursery-rows again. Now, although the utmost care was taken in saving every particle of root on the Wellingtonias (and they were well furnished with roots), and equal care was taken in planting and staking, and the weather that succeeded was in no respect severe compared to most winters, only about one-third of the plants did well; about another third died, in a great measure, back to near the lowest tier of branches, and about one-third died outright. Some of the latter I replaced at various times during the months of June, July, and August, with small plants that had never been in pots, but were only a few inches high, and these all succeeded tolerably well. In September I planted three or four larger plants to fill up the remaining vacancies; but, strange to say, those that were planted in September all died, or nearly so, during the winter, and I replaced them again in April of the present year, and they have since done well. Now, the lesson which this would seem to teach is, that September is a bad month to plant Wellingtonias, yet I am unwilling to come to that conclusion, and must leave it to be further confirmed, either in my own practice or by others. Generally speaking, September is thought to be a good time to remove evergreens and Pinuses, but in this case it was otherwise. I may add, that amongst the remainder of the Wellingtonias planted out again into the nursery-rows there were great losses, so that I am led to conclude, that with its many advantages this plant is certainly not one of the easiest to transplant, or, at all events, the autumn seems a less favourable time than spring for the operation.

Contrasting strongly with the above was the success attending the removal of Cupressus Lawsoniana, for although growing side by side with the Wellingtonias, and making quite as much progress, not one that I remember to have planted has ever shown the least symptom of injury. Certainly the growth for a short time was checked, but I do not think a single twig or leaf was browned, and they seem to grow well whether planted in autumn, winter, or spring, and possibly might do so in summer too, but I have not had occasion to plant at that time. Some planted in rather hard stony ground in March have done very well, and why should not the Wellingtonia be equally accommodating, or rather when is the best time to plant the latter? It is true, the trees referred to are of different genera, but a near relation of Cupressus Lawsoniana, C. macrocarpa, is worse to transplant than the Wellingtonia, so that no rule can be applied generally. Practice, however, presents us with the most reliable information; and if people would, like Mr. Stewart, of Nuneham, detail their losses as well as their successes, we should then be able to judge more accurately as to what is the proper time to transplant.—J. ROSSON.

ROSE CULTURE ON A COLD SOIL AND EXPOSED SITUATION.

Would Mr. Radclyffe name twenty or thirty Hybrid Perpetual Roses, of distinct colours, likely to succeed under the following conditions? Situation, 600 feet above the sea level, and exposed for nearly six months to high winds from S.E. and S.W.; soil, rather retentive of moisture, and sure to clog if worked when wet; subsoil, a cold whitish marl.

I have defended my garden from winds by a wall and embankments, which afford it considerable protection; but it is still more exposed than I would wish. I have access to sand and peat with which to improve the quality of the soil, and am quite willing to spend the necessary labour in trenching and draining the beds.

I planted some Roses—Hybrid Perpetuals and Teas—in the spring of the present year. With three or four exceptions they have done miserably. The only decent-blooming Rose I had was a half-standard Gloire de Dijon. All the others produced a fair number of blossoms and tolerable foliage; but just as I expected them to open, buds and leaves were destroyed

by mildew. I used the wash recommended by Mr. Radclyffe, but with little success.—A SUNSHINER, *South of Ireland*.

[You must deeply subsoil, and mix your heath land with your cold soil. The altitude above the level of the sea, with the cold, undrained subsoil, checked and spoiled your Roses. The altitude alone would not do it if the sun has access to the land. Roses on their own roots, or on any stock, dislike their roots lying in continual wet. Even Willow-beds are the better for drainage. You should drain into a cemented tank. I expect, too, that the Roses wanted a little more water poured over them. The best thirty distinct varieties, free-bloomers and hardy, suited to such a situation, they being on the Manetti stock, are Charles Lefebvre, Senateur Vaisse, Jules Margottin, Duc de Oazes, John Hopper, W. Griffiths, Madame C. Crapet, Prince Camille de Rohan, Maurice Bernardin, Dr. Andry, Madame Emain, Dr. Jamain, Vicomte Vigier, Souvenir de Comte Cavour, Earonne Maynard, Marguerite de St. Amand, Duchesse de Morny, Victor Verdier, Lord Macaulay, Lady Suffield, John Keynes, Achille Gonod, Triomphe de Paris, Baronne Prevost, Anna Alexieff, Madame Charles Wood, Madame Freeman, Charles Rouillard, new and fine; Maréchal Vaillant, and Baron Gonella (Bourbon), hardy, distinct, and extra fine.

I have drained two of my gardens 3 feet 6 inches deep since I came here, and I am about to drain another. It is wonderful how much healthier the Roses are where the ground has been drained. Roses like water over them, but not under them.—W. F. RADCLYFFE.]

VIOLA CORNUTA, AND VIOLA MONTANA.

ALLOW me to say a few words respecting the late-blooming qualities of this much-vaunted plant; and I am principally induced to do so after reading the remarks of Mr. Wills in his reply to your correspondent "Donset" at page 213, wherein he (Mr. Wills), writes in glowing terms as to the condition and beauty in which he found the different varieties of Viola at the Liverpool Botanic Gardens at the time of his visit there some six or seven weeks ago. I myself paid a visit to the above-named gardens on the 1st of August, and was charmed with the beauty of the ribbon-border referred to by Mr. Wills, and which was planted as follows:—Front row, Viola lutea, then V. cornuta, next that beautiful and useful flower-garden plant the variegated Dactylis, and next it V. montana. I thought it at the time one of the most chaste and beautiful borders out of the many beautiful ones in the whole garden; and certainly V. cornuta was at that date everything that could be wished for as a bedding plant of its colour, and I quite made up my mind, that should its blooming continue throughout the season (of which I must admit I had then my doubts), I would use it more extensively than, fortunately, I have done this season. So much for its qualities on the above date.

On the 29th of August I again went through the Botanic Gardens with a friend; and on coming to the border in question, instead of the Viola cornuta I found its place occupied with a band of Perilla, thus proving that its season of beauty was over, and that even in the favoured position assigned to it by Mr. Tyerman its blooming period was not prolonged beyond the end of August at the latest; and if I remember aright the beds of it in the other parts of the garden had more or less ceased blooming. I think I noticed that one of the beds of V. cornuta, in the group of beds of Violas mentioned by Mr. Wills, had a little better appearance than the others of the same kind, and possibly this may have been Mr. Wills's variety, but I did not at the time examine it closely enough to say if it was so or not.

With me this season Viola cornuta has proved quite a failure; for since the middle of August it has scarcely had any flowers at all upon it, and certainly in my case it has not been caused through the plants being sickly, as, since they ceased blooming they have continued to grow, and have increased in size considerably. Not one plant has died off. My plants were all from seed sown in the spring, and from three different packets of seed, each packet from a different source; but I kept the plants from each packet distinct, so that I might see if there should be any difference in them. The plants from two of the packets came very true and flowered evenly, and I believe are Mr. Bennett's variety; the plants from the other packet were more uneven in their growth and habit, and did not bloom so freely. I have seen V. cornuta in one or two other

places lately, but in each case it had ceased blooming towards the end of August. I trust we shall hear that it has behaved better generally. Perhaps Mr. Findlay, of the Botanic Garden, Manchester, will kindly let your readers know how it has fared with him. I noticed when there at the National Horticultural Show in June, that he had planted it out extensively. I, for one, would be glad to know if it has proved a continuous bloomer with him.

If, with the very liberal treatment recommended by Mr. Wills, this plant should prove to continue flowering freely throughout the season (and we have his authority that it will do so), then, if used in conjunction with plants that will also bear that liberal treatment, it will, indeed, be a useful plant for general flower-gardening purposes; but if it is to cease blooming by the middle or end of August, then, I say, for general purposes it will be comparatively useless. If I am spared for another year, and should be here, I will see what it will do under the treatment recommended, and hope to be better satisfied with it than I have been this season.—JOHN H. MASON, *Prince's Park, Liverpool.*

P.S.—I took a stroll on the 22nd of September through the Liverpool Botanic Garden, and noticed that *Viola montana* was looking as well as it has done throughout the season. This plant is worthy of general cultivation, and will be very useful for ribboning and for beds.

PLANTS IN FLOWER DURING SEPTEMBER.

ACKLAM HALL, MIDDLESBROUGH-ON-TEES.

Sept. 2. <i>Lilium tigrinum</i>	Sept. 16. <i>Escallonia rubra</i>
<i>Tigridia pavonia</i>	<i>Lonicera periclymenum</i>
<i>Dahlia variabilis</i>	<i>Fuchsia fulgens</i>
<i>Jasione montana</i>	<i>microphylla</i>
<i>Solanum dulcamara</i>	<i>Helianthus multiflorus</i>
<i>Knautia arvensis</i>	<i>Aristolochia siphio</i>
<i>Alchemilla vulgaris</i>	<i>Clematis vitalba</i>
<i>Scutellaria coronopus</i>	<i>Lupinus roseus</i>
" 3. <i>Atriplex rubra</i>	" 20. <i>Cobaea scandens</i>
<i>Sisymbrium Sophia</i>	<i>Lophospermum scandens</i>
<i>Polygonum convolvulus</i>	<i>Maurandya Barclayana</i>
<i>bistorta</i>	<i>Lobelia St. Clair</i>
" 7. <i>Orobanch niger</i>	<i>Anemone japonica</i>
<i>Mentha arvensis</i>	<i>Sium angustifolium</i>
<i>rotundifolia</i>	<i>Turritis glabra</i>
<i>piperita</i>	<i>Scorzonera hispanica</i>
" 9. <i>Hydrangea hortensis</i>	<i>Tragopogon porrifolius</i>
<i>Convolvulus major</i>	<i>Mentha pulegium</i>
<i>Cyclamen hederifolium</i>	<i>Helichrysum bracteatum</i>
<i>europaeum</i>	" 24. <i>Lycopus europaeus</i>
<i>Spiraea Standishii</i>	<i>Hyoscyamus niger</i>
<i>Pernettya mucronata</i>	<i>Amaranthus caudatus</i>
<i>Konigia maritima</i>	<i>hypochoeridicus</i>
<i>Viscaria oculata</i>	<i>Catananche carulea</i>
<i>Burridgei</i>	<i>Astelma lanatus</i>
<i>Lupinus albus</i>	<i>Senecio elegans</i>
<i>Nemophila atomaria</i>	<i>Ageratum mexicanum</i>
<i>maculata</i>	" 23. <i>Eccremocarpus scaber</i>
" 12. <i>Circea alpina</i>	<i>Impatiens noli-me-tangere</i>
<i>Cytisus capitatus</i>	<i>Solanum lycopersicum</i>
<i>Centranthus macrosiphon</i>	<i>Lobelia propinqua</i>
<i>Iuula dysenterica</i>	<i>Lantana aculeata</i>
<i>Oenothera Drummondii</i>	<i>Galega montana</i>
<i>macrocarpa</i>	<i>Hieracium aurantiacum</i>
<i>Tamarix gallica</i>	<i>Mentha piperita variegata</i>
<i>Alchemilla conjuncta</i>	<i>Scabiosa columbaria</i>
<i>alpina</i>	<i>Pyrethrum Clusii</i>
<i>Tritoma naria</i>	

—M. II.

SUMMER CUTTINGS OF ROSES.

In consequence of a suggestion made in your columns, I put in a number of cuttings of *Général Jacqueminot*, *Senateur Vaisse*, *Blairii*, and others, about the middle of July last, underneath some Black Currant trees. The greater part have done well, and are now, at the end of September, promising young plants. Some of your readers may possibly be glad to be assured of this easy way of striking in summer as well as in the autumn, and without hand-glasses.—A. C.

POLYSTICHUM LONGITIS.

"*FILIX-FEMINA*" gives an account of a proliferous plant she has of the above Fern. I never remember seeing or hearing of *P. lonchitis* being proliferous before. I have *Polystichum lineare proliferum*, and also a plant of *Polystichum aculeatum cristatum*, which this year has become proliferous. I have eight or nine established plants of the same already.

If "*FILIX-FEMINA*" has no objection, I shall be pleased to exchange one of my proliferous Ferns for a *P. lonchitis*.

A plant of *Polystichum grandidens* which I purchased a few months since, has thrown out one or two bulbs, from which I am raising plants.

If "*FILIX-FEMINA*" wishes, I can tell her (for I conclude the person I now mention is a lady), how I produce young Ferns without sowing seed. My address can be had from the Editor of this paper.—J. E. M.

SCALE KILLING.

"BLESS me!"—I quote from your columns—who would employ that odious linseed oil, or train oil, or even sweet oil (not always sweet), or that still more abominably offensive soft soap, when scale, be it black, white, or brown, and mealy bug or aphides, and nearly all other plant evils, can be so easily destroyed by a cheap, inodorous, and innocuous preparation?

It must be some one, or two, or three years since my eye rested on a few words of advice from one of our most agreeable and wise instructors, Mr. Wilson Saunders. He said, as far as I remember, that spirits of wine was one of the best remedies for scale. I tried and found it so, but its price, some 5s. or 6s. a-quart, was a barrier to its being used extensively. I therefore waited patiently, and took advantage of the art by which spirits of wine were made into methylated spirits, and sold at 5s. a-gallon. This has proved a great boon to gardeners, it is so deadly to all insects; even that woolly fellow that is so great a pest to our Apple trees succumbs to its effect, and then there is no smell of oil, of sulphur, or of soft soap. What a real comfort!—T. R.

TRANSPLANTING—INFLUENCE OF SOIL AND DRAINING.

THERE is a typographical error in my communication (page 192), in reply to "BETA," which if not corrected may puzzle the lovers of horticulture; instead of the "tap" roots being almost visible, it should be "top or surface roots."

I beg to suggest to "BETA," that the right time for transplanting fruit trees is autumn, and about the end of September, or beginning of October; they may then be permitted to bear in the following year. If transplanted in spring they should not be permitted to bear the same year, as the tree will not be sufficiently established. Planting in the end of September gives a clear month, and is in fact a gain of a year. Abandon the question of leaves, and trees planted about the time I suggest, with care and attention, will do well. I have made trees my study, but confess the more I know the more I feel my own inadequacy to master the subject. It does not, however, follow, because you cannot know all you should not be glad to know part. Knowledge is only to be obtained by delving; the definition of wisdom I consider to be the right application of knowledge.

One thing has attracted my attention more particularly with regard to trees, and that is soil and subsoil. I lived for some years in Somersetshire, and I was struck with the different strength and flavour of cider produced in those parts I was accustomed to visit, though from the same description of fruit, and I found the quality of the subsoil had the same effect on the flavour of the fruit as the character of the pasture has on the quality of the cheese. In the villages of Banwell, Lacking, and Hutton, at the base of a range of limestone hills near Weston-super-Mare, containing a large amount of carbon, the cider made from fruit grown in those localities is remarkable for its strength; whereas, I have known instances of Apple trees growing in stiff loam, devoid of stones of any kind, never bearing fruit at all.

I have tried the following plan with favourable results—dig a trench round a tree about 2 feet from the stem—that is, of a tree five to ten years of age, and about 18 inches deep and wide. Fill it in with macadamised stones or bricks; the good effects will soon be visible, the woody roots will throw out numerous rootlets or fibres. A top-dressing of sifted lime rubbish is good for all fruit trees.

I lived some years at Melksham, a few miles from Seend. The subsoil at one part is a stiff clay, almost impervious; here both Vines and Peach trees luxuriate, owing, I think, to the retention of moisture in the loam. It was not favourable for Apples; but in another part where the subsoil was gravel, the Ribston Pippins were splendid.

I lived at Devizes for some years, where I had a garden on a

subsoil of green sand; this I found unsuited for Apples, which were cankered, and of slow growth, and wall fruit was without flavour. In such localities an artificial subsoil must be made.

In the village of Seend the subsoil is a rich iron ore, the worst producing thirty-three per cent. of iron. On this all trees thrive, especially the Apricot. One tree produced eighty dozen this year on a south aspect. The poor regard it as a stock tree to help to pay rent. If highly manured it gums, from an exuberance of sap. The failure of a bough, as if struck by lightning, is caused by an insect, which cuts off the communication of the sap vessels which supply the leaves. It will be found that although the leaves wither the wood is not dead. Whilst conversing with the intelligent gardener of a gentleman horticulturist and first-rate florist in this village, who has favoured me with permission to visit his houses, I observed the bough of a pot Apricot languishing in the same manner as those on walls. I broke off the bough at the identical spot where the leaves commenced to droop, and I found the insect had punctured it entirely round between the bark and wood, falling out as I broke it off. If gardeners will examine a bough as soon as this drooping of the leaves commences, they will be gratified so far by discovering the cause.

If fruit trees bear nothing but leaves, they are worthless. Do not, however, dig them up, try them one year longer. I have seen an unfruitful Pear tree trenched round, and the wood roots cut off in the autumn, producing the following year a prodigious crop, and things more marvellous than that. If a Fig tree is planted in a rich loam, you will have no Figs, but give it a foundation and drainage of stones, and you will have abundance, whether limestone, bricks, flint, or rubble. I have tasted the most delicious Figs at St. Helena, grown on that rocky island, composed of volcanic matter highly carbonised. At Melksham I have seen two Fig trees in a garden, one in rich loam, a luxuriant tree, fruitless; the other in a subsoil of stones, full of fruit. Such was the character of Palestine, the land of Figs, Olives, Grapes, and Pomegranates. All stone-bearing fruit trees require help whilst hardening the stone—that is the trying time; the best help is mulch or stable-dung kept moist, not too thick. The ground should not be encumbered with flowers or vegetables; if so, the sun cannot get at the roots, for it is not the action of the sun on the fruit that ripens it, but its extracting the acidity from the soil, leaving the ammonia and saccharine matter to fertilise and perfect the fruit, both in flavour and appearance. The Apricot thrives best in the south aspect, and this is natural, considering from whence we derive it.—EXCELSIOR.

VARIEGATED AND ZONAL PELARGONIUMS.

Will you mention the names of the twelve best and newest Variegated, and twelve of the best and newest Zonal Pelargoniums? I want to grow them for exhibition as well as sale, and I am willing to pay a good price for really good varieties, but am at a loss to know which to select.—W. S. D.

[Many of our readers must be in the same difficulty as our correspondent, so we answer him thus prominently.]

The following thirteen are *Zonals*: *Scarlet*: Lord Derby (Mann), Clipper, Warrior, Imperial, Lucius, and Faust. *White*: Purity and Virgo Marie. *Salmon-shaded*: Engénie Mézard, Madame Werle, and Monsieur Barré. *Pink*: Beauté de Suresnes and Rose Rendatler. *Rosy Scarlet*: Roi d'Italie.

The following are *Variegated* and *Tricolors*. The first eight have *yellow* grounds:—Miss Watson, Mrs. Dix, Jetty Lacy, Sunray, Victoria Regina, King of Tricolors, Countess of Craven, and Queen Victoria. The next four have *white* grounds:—Miss Burdett Coutts, Italian Sunshine, Peri, and Alexandra.

There are some fine varieties of *Bronze* and *Golden Zonals* which should be added to the collection, such as Beauty of Ribblesdale, Beauty of Calderdale, Model, Circle, &c.

We would also refer you to our Journal for September 19th, where you will see all the leading sorts which took the first prizes and certificates. There are many more equally good varieties.]

GARDENING IN HYDE PARK.

Will you tell me the name of the Caladium planted in Hyde Park, and whether the Canna roots are stored away in pots, or dry mould, to live through the winter sheltered?—G. W. H.

[Mr. Mann, whose taste and skill are so conspicuous in the arrangement and cultivation of the beds and borders in Hyde

Park, informs us that the Caladium there planted is *C. esculentum*. The Canna roots are kept through the winter under the stage in the greenhouse, not in pots. The earth is shaken from the roots before being placed under the stage.]

BEDGEBURY.

DEEPLY embosomed in trees, but with the foreground open and clear, stands Bedgebury, the noble seat of A. J. Beresford Hope, Esq., M.P., a modern mansion of considerable elevation and size, erected on or near the site of an ancient edifice that had figured in the county history. The present mansion is a stone structure, much enriched by architectural ornament. It has a great number of windows, each adorned with suitable mouldings and carvings, and there are two tiers of windows in the roof which give a lightness to the structure which few country mansions possess, while throughout there seems ample depth between the storeys to remove the idea that there is any lack of light in the rooms; and as, I believe, it has been entirely built during the present century, when the defects in the architecture of the Georgian period became so manifest as to call for a change, we may fairly presume that low inconvenient rooms form no part of the plan. The site is elevated, but not so much as to be bleak, and a high well-clothed ground shelters it on the west and north-west, and more distantly on the south and south-west sides also. There is no lack of that natural scenery which forms so important a consideration in the case of a country home. The principal view is to the east, with a wide sweep to the south-east and north-east; and although the extensive dressed grounds by which the mansion is surrounded give it a fair degree of openness in other directions, the principal one is on the side above-mentioned. The carriage front is to the north, and is open to the park, but on the south and eastern sides a broad terrace with a sub-terrace flower garden on gravel extends along these two sides, and from them the ground recedes in both directions, but more particularly to the south. Masses of choice shrubs clothe a portion of the extensive lawn on the east side, while a clear unbroken incline of closely-shaven turf of some half-dozen acres or more carries the eye down to a lake of considerable extent, which will be described hereafter. This incline, it is proper to say, extends westward of the mansion, but in the same slope; a broad walk leading from the mansion westward along the top of the slope commands the whole, and at the same time carries the visitor in the direction of the kitchen garden, which is, however, properly concealed by intervening trees and shrubberies from the dressed lawn. The western edge of this open lawn is bounded by shrubbery, and at one corner we noticed a nice little flower garden—not little, indeed, if met with elsewhere, but when one sees an unbroken slope of six or seven acres of closely-mown turf all in a piece, ordinary objects look small. I may add, that the shrubbery alluded to at the west end of this incline forms a boundary to one of the carriage roads which approach the mansion from the south, which, taking a sweep round the garden, joins the other at the north front.

The mansion, as will be seen, occupies a rising ground that falls to the east and south, the west and north being more level, and the large inclined lawn alluded to forms a sort of irregular parallelogram all inclining one way, its southern or lower edge sloping to the lake which occupies the valley, for on the opposite side the ground rises again; but the margin is planted at intervals with choice Pinuses and other shrubs, which eventually blend into the wood by which it is backed; for I must observe, that very properly no attempt is made here to show anything in the way of keeping, the Heath and common Brake being almost tall enough to hide a bullock; there is a scattering of Scotch Fir and other trees, with here and there some of the best of the Pinuses of the day, rising up into stately specimens. The past winter had, however, left tokens of its destructive character here as well as elsewhere, though less severely so than in some places. *Cupressus macrocarpa*, *Pinus insignis*, and even some *Deodars* had suffered, but it was pleasing to see the *Wellingtonia*, of which there were numerous good specimens, uninjured; and the same may be said of *Cupressus Lawsoniana*, *Thuja borealis*, *Retinospora pisifera*, and others. I need hardly add, that some of the latter, as well as other recent introductions, had not assumed the tree proportions of *Abies Douglasii*, *Pinus excelsa*, and the like; but good representatives of them were to be seen, as well as *Cryptomeria elegans*, which promises to be a great acquisition. *Thuja Lobbii* and *T. gigantea* had also escaped, and when it is

mentioned that such things endured the severe frost while growing on the margins of a lake, we may be sure they are tolerably hardy.

In looking over these specimens with Mr. Don, the very intelligent manager of the gardens, it was interesting to see the different effect which the soil of Bedgebury had on the growth of the various species as compared with that of Linton. Some that are at the latter place in the greatest luxuriance, were evidently not at home at Bedgebury, while such as *Abies Douglasii* seem to thrive at Bedgebury, while it may be said only merely to live at Linton. The cause is obvious enough—the luxuriance of the Heath and Bracken Fern denotes the soil at once. Neither is found at Linton, and can only be made to grow by means of imported material. Most of the Linton specimens are growing where lime prevails, a substance diametrically opposed to peat, and the wonder why plants do not thrive equally well in both soils ceases at once. But apart from the Pinuses found on the margins of the lake, and backward some distance in the wood, there are specimens also in the dressed grounds. The soil of these differs in some degree from that of the position just described, being more of a ferruginous than of a calcareous nature, and is, consequently, favourable to the growth of that class of plants of which the *Rhododendron* may be said to be the type, for that shrub is met with in the greatest luxuriance at every turning. The lake itself being quite artificial, masses of *Rhododendrons* are employed to screen the dams and waterfalls which are necessary, the inclination of the stream down the valley being too much to have the water all in one sheet, but it is very well regulated as to its sinuous shore-line; and at those places where a fall cannot be avoided, judicious planting shuts out from view all that is objectionable. The lake occupies several acres, and in its lower compartment an island of *Rhododendrons* of apparently about half an acre in extent, must be very lovely when in bloom, and the rising banks on the opposite side being, as before described, of wild Heath 3 or 4 feet high, must, when in bloom, present a mass of flowers to which our most highly cultivated flower-beds can bear no comparison, while the sombre Scotch Firs recall the mind to scenes in which Hops and fruit orchards are things unknown, yet a few minutes' ride brings the visitor into intimate association with these emblems of high cultivation. Leaving, therefore, the lake and its various surroundings, let us retrace our steps and make a more intimate acquaintance with the objects that require cultivation, and examine more in detail the contents of that all-important adjunct to country dwellings, great and small, the kitchen garden.

Perhaps there is no feature in connection with the mansions of our gentry and nobility, which shows more pointedly than anything else the additions that have been made to it from time to time, than the kitchen garden. When it becomes necessary to enlarge a mansion, means are taken to harmonise the new part with the old, and when the boundary of the pleasure ground fence is pushed further out into the park, the annexed portion is quickly made to assume the polished aspect of the other; but generally speaking, a kitchen garden is walled round, and against these walls glass and other structures are often reared, or where not so, fruit trees are trained; so that when it is found out that the kitchen garden and its appurtenances are too small, its enlargement can only be accomplished by adding a piece on the other side of the wall—another garden, in fact, having no connection with No. 1 but by the door. Now, Bedgebury is no exception to a rule that is exemplified in quite one-half the large gardens in this country, for additions have been made from time to time, and houses and pits built in places well adapted, it is true, for the well-being of the subjects cultivated, but not near enough each other to produce a striking effect as a whole. There is a range of vineries broad and lofty, with the iron curvilinear roof, so strongly advocated thirty or thirty-five years ago, occupying a suitable site against a south wall, and excellent Grapes were hanging in abundance, protected from the inroads of wasps by a framework of perforated zinc over the ventilators; and a door frame of the same material opening the reverse way to the glass one, which was fastened back, gave ample ventilation in that way as well. The credit of this arrangement, which answers admirably, I believe was due to Mr. Don. In another place a span-roofed stove was well filled with such plants as are most useful when stove plants properly are of most value—that is, in winter. Fine-leaved and flowering plants of various sizes, with some choice creepers overhanging the roof, gave proof that at the fitting time the contents would be in order. A *Camellia-house*

with plants in it, such as a writer in this Journal described as being likely to conceal a bullock, showed also that at the fitting time an almost inexhaustible supply of bloom might be expected, while on the shelves the flowering plants of the present season were fairly represented. One I noticed as being particularly well grown, which it seldom is elsewhere, was *Tritonia aurea* and on inquiry of Mr. Don, he attributed its success to the plant not being too often disturbed. This seems a very probable cause, for, like the Iris, and some other plants, its bulbs would seem to do better when let alone than when annually shifted—much the same, I suppose, as the Lily of the Valley, which also dislikes change. In another span-roofed house, or rather pit, were *Cucumber* plants turned out for winter bearing, while ranges of lean-to pits gave token that in early spring there was much to look after. Mr. Don, however, had adopted a very wise precaution. All these ranges of pits had a hot-water pipe run through them, so that the trouble of daily covering in severe weather, as well as the uncertainty of it, was obviated, and one of the compartments of some 60 or 80 feet long, with ample breadth, I observed, was filled with bedding *Pelargonium* cuttings of the most popular kinds, not in pots or boxes, but stuck into the ground, where I was told they would remain all winter, and be taken up and potted in March. A double row of four-inch pipes along the front afforded an ample amount of heat, and told the secret of their doing so well. The same plan, I believe, is adopted at other places where the same means exist, and I have seen it myself at Dalkeith, and once heard of its being tried without the aid of fire heat at all; but the result was disastrous to bedding *Pelargoniums*, although *Verbenas* and many other plants did not do amiss. Other pits at Bedgebury were occupied with cuttings of various plants; and potted plants for winter and spring decoration, such as Chinese *Primulas*, *Cinerarias*, and a good batch of *Poinsettia pulcherrima*, in another place, indicated that winter as well as spring was thought of.

I have described the kitchen garden as being some little distance to the west of the mansion, screened from it by high trees and shrubs. Its southern side, however, is connected with the dressed ground by an intervening plot of ground, which Mr. Don uses as a sort of nursery. In this were several specimens of *Pinus* not sufficiently large to plant out yet, as well as some of the more scarce and recently imported ones, together with plants of other kinds; for I may observe that Mr. Don, true to the science with which his name is so intimately associated, prefers a botanical to a floral collection, and it is only necessary to point to one of the most popular of our catalogues of plants, of which he was the author, to prove his being a botanist of high standing. Nevertheless, his knowledge of flowers in the view taken of them by professed florists, is not the less sound, and both are cultivated with success. Amongst other subjects in this nursery I observed several species of the Grasses, some very ornamental, and the more so by being grouped together; several alpine plants, a quantity of early-flowering annuals, and other hardy plants for the spring ornamentation of the flower-beds; and several singular-looking plants, well known to Mr. Don years before they had become so popular in fashionable gardens. One plant I was particularly struck with, though not growing here, but in one of the compartments in the parterre along with *Pelargoniums*, *Calceolarias*, and the like; it was *Abronia umbellata*, an annual very much like a *Verbena* in habit and flower, which Mr. Don said had in years gone by done so well with him; its lovely pink flower might easily be taken for a *Verbena* at the distance. Beds of *Phlox Drummondii* also proved how well the heathy soil suited them, for nothing could exceed their beauty and health; while *Asters* and other things represented the most showy of our autumnal flowers in suitable corners. This nursery, or preparing ground, however, was more devoted to botanical than to floral objects. In another place, or rather in a secluded corner of it, a myriad of hand-lights with sand lying about told that propagating was going on. This I had not time to examine, but from the number of *Cypresses*, *Retinosporas*, *Thujas*, *Wellingtonias*, and other plants met with everywhere, a considerable amount of work has been done here in years gone by, and is being still carried on.

Bedgebury, however, has its drawbacks as well as advantages, and in the garden department there is, I believe, no lack of water such as Mr. Fish has occasion to lament about in dry seasons, for I am told the supply is good; but gravel of good quality for walks is not to be had. A fine-looking gravel of a shingly character is brought from a long distance for some of the walks on the parterre, terrace, and other important parts,

but that for the more distant walks is of a more common kind. Mr. Don, however, had taken a very wise precaution to obviate the unpleasantness of such walks in damp weather. He had made them higher in the middle than they often are, and had placed a line of channel bricks along each side to receive the water, and this was especially necessary in the case of the hilly walks, but was also practised with the level ones, and no doubt rendered the soft material of the walks more firm in wet weather. These grooved or channelled bricks are well worthy of attention in every place where heavy rains often tear up the walks, and I believe such bricks are not expensive, while their fixing is a much easier affair than the pebble paving met with in other places. I believe that stone of any kind is scarce in the neighbourhood, that for the public roads being brought from a distance. The stone found near seems to be strongly impregnated with iron, which evidently forms an important constituent in the soil; for where black peat does not exist, the soil is one of that yellow character differing widely from ordinary clays, yet almost as adhesive and impervious to water. As *Rhododendrons* thrive well in it, scatter their seed, and reproduce themselves in abundance in the rank herbage, we may infer that, although widely differing in colour from peat (for it is pale yellow), it nevertheless possesses the elements necessary for that class of plants. Soil of this character extends over an area of many miles on the southern boundary of Kent and the adjoining county of Sussex, and that iron abounds is proved by the fact that furnaces for its making existed at Lamberhurst, only a very short distance from Bedgebury, and there, I was told, the railings surrounding St. Paul's Cathedral were cast. The absence of coal, and the plentiful supply of ore, as well as of fuel, in other places, have occasioned the decline of these iron works. The neighbourhood is, however, not without interest. The pleasant village of Goudhurst, within which parish, I believe, Bedgebury stands, is pleasantly situated on a rising ground, and report says that from the top of the church steeple fifty-two other churches may be seen, and that in a part of the country not like Lancashire, where large towns exist within short distances of each other, but in a rural district. Goudhurst is five miles south of Marden Station on the South-Eastern Railway, and Bedgebury is upwards of a mile further south, the greater part of the intervening space being occupied by the park, which is much diversified by hill and dale, wood and water, the last, however, less conspicuous. The trees most at home in such a soil are Oaks, Limes, and Chestnuts, but I do not recollect of seeing Elms attaining anything like the proportion they do in soils containing more calcareous matter; but many trees accommodate themselves to all kinds of soil, and so do cultivated plants.

The principal approach to Bedgebury from Cranbrook is through an extensive wood, the greater part of which seems never to have been invaded by either the spade or plough since it was formed. The approach from the south is through what may be called a Pine forest; indeed the extent of Bedgebury woods and the historical legends connected therewith are often discoursed of by the old people living in the neighbourhood. The roads are good, and curving now around a hill and then descending a valley, they present a delightful variety of aspect. Certainly the bolder features of such a place as Alton Towers are wanting, but the wildness of surrounding objects, with the sparingly-introduced feature now and then of civilised life, gives a scope for the imagination which the rich meadow fails to do. But the latter has its representative also, for the northern approach to the mansion is through the open park. Still the view of the mansion giving the best notion of its vastness, is from an opposite direction; its situation, however, is such that, although it stands on high ground, it is not seen at any great distance, and it rather bursts into view unexpectedly in all its grandeur, than presents itself as an object to be gazed at from a distance. Its merits in an architectural point of view I must leave others to decide; but the high position its present owner holds as a judge and patron of the fine arts would tend to the belief that the house, which has been so extensively remodelled by him, would be in accordance with those somewhat capricious laws which govern good taste.

In my rambles by the side of the lake I observed a plant but little grown in English gardens, but which is worthy of notice—namely, the American Cranberry, a plant delighting in peaty bogs, and here I understood it to be laden with fruit at the proper season, although no especial care was taken of it, and it was struggling with the other wild herbage of the spot for a place which it seemed by its robustness destined to hold.

Many other little matters were pointed out to me by Mr. Don; and the order and good keeping which pervaded all the departments in the dressed ground under his care, as well as in the kitchen garden, attested his practical skill. Bedgebury, therefore, in such hands as that of Mr. Hope and his able garden manager is likely to maintain a high position; while the care and attention now bestowed on trees and shrubs likely to constitute a feature in the landscape will, doubtless, at a future day have an effect on the character of a scene of labour and pleasure alike creditable to master and man.—J. Rensson.

PROLONGED HORTICULTURAL SHOWS.

LIKE other matters, there are two sides to this question. I agree with your correspondent that two or three days are quite long enough for fruit to remain at an exhibition, but cannot agree with him that "the same remark applies to plants," because it has been proved beyond cavil that the bulk of the subjects that form our flower shows can remain at an exhibition a week without being in any degree injured; and another fact has been proved, that if we are to have great exhibitions and large prizes are to be awarded, then exhibitors must be prepared to allow their productions to remain a few days longer than usual.

For fifteen or twenty years there was a one-day's show at Chiswick, and right grand shows they were; but what about the Horticultural Society in whose grounds these shows were held? Hopelessly bankrupt—and why? Exhibitions were the cause of its ruin. I am now speaking of the old Horticultural Society as it existed twelve or fourteen years ago.

I am quite prepared to admit that the exhibitions were a necessity, and that but for them the Society would not have existed as long as it did; but had these shows remained open three or four days in order to have given the people an opportunity (I mean the shilling public), of seeing them, then I venture to assert that the financial position of the Horticultural Society would have been very different, and the Society would have been able to render greater service to horticulture than it has hitherto done, and of course exhibitors would have been benefited likewise. But it may be said in reply, "Look at the Royal Botanic Society. They only have one day's show there, and they go on smoothly." I reply, True, they have grand shows and they go on smoothly; but what about their financial position? Why, they have a heavy debt that cripples all effort; and so it will ever be until the basis is widened. I have thought much about this subject, and have come to the conclusion, providing extra large shows are held, a large amount given in prizes, and safe accommodation afforded for the subjects exhibited, that it will be for the benefit of horticulture and exhibitors if the latter allow their productions to remain at an exhibition four or five days; and thus the Society under whose auspices the show is held, the exhibitor, and the public will all derive benefit; and an exhibition that rests upon this broad basis of advantage is sure of permanence and success.—B. A.

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 1ST.

FRUIT COMMITTEE.—Prizes were offered for the best collection of any description of Grapes except Muscats, for the best collection of White Muscats, for the best dish of Muscat Hamburgh, and for the best collection of Pearmain Apples, but no exhibitors came forward to claim them. In the class for the best three dishes of Dessert Apples, Mr. Hughes, gardener to the Rev. G. Kemp, was first with large examples of the Ribston Pippin, Cox's Orange Pippin, and Lewis's Incomparable. Mr. Whiting, The Deepdene, Dorking, was second with Ribston Pippin, Cox's Orange Pippin, and a kind the name of which was unknown. A third prize was awarded to Mr. Ruffett, gardener to Viscountess Palmerston, Brockett Hall, for Cox's Pomona, Cellini, and Ribston Pippin. J. Garland, Esq., Tynham Green, and Mr. Lyan, gardener to Lord Boston, Holsor, also exhibited in this class. For the best three dishes of Dessert Pears a first prize was awarded to Mr. Whiting for good fruit of Louise Bonne of Jersey, Beurré d'Amanlis, and Gratioli. Mr. Neale, gardener to R. A. Cartwright, Esq., Edgcott Gardens, Banbury, sent Williams's Bon Chrétien, Thompson's, and Marie Louise, but the last two were not ripe enough to merit an award. A special certificate was awarded to J. Garland, Esq., for unusually large and fine examples of Blenheim Pippin, and for Duncow's Seedling, known in the markets as the Wellington, which, though not so remarkable as the preceding in point of size, was still very fine. A special certificate was likewise given to Mr. Ruffett for two

Pines, one a handsome Blood Pine and the other a Providence, beautifully grown and ripened, and weighing 10 lbs.

Mr. Green, gardener to W. Wilson Saunders, Esq., Reigate, sent a fine specimen of Glory of the West, a large kitchen Apple. From Mr. A. Dean, Maybush, Southampton, came a collection of Apples and Pears, including among others good samples of Scarlet Admirable, Herefordshire Pearmain, Hawthorned, Golden Noble, Blenheim Pippin, and Lemon Pippin, the last very fine; and Beurré Clairgean Pears, to which the same remark applies. Mr. Plester, Elsenham Hall Gardens, sent an Apple under the name of old "Essex Golden Pippin," which appeared to be the Ingestrie Yellow; likewise Queen Anne's Pocket Melon, and a cross-bred from it, larger in size, but not equal to it in ornamental appearance. Queen Anne's Pocket Melon was also shown by Mr. Marwell, gardener to the Earl of Gainsborough, who had also Exton Green-fleshed Melon, which, though not perfectly ripe, proved of good flavour. Messrs. Veitch & Sons, Chelsea, exhibited a Tomato which was considered distinct and provisionally named Veitch's Prolific; but there is now every reason to believe it to be a form of the Pear-formed of Thorburn. The only other subjects worthy of note were Premier Runner Bean, shown by Mr. R. Dean, Ealing, which grows from $1\frac{1}{2}$ to 5 feet high, and produces an abundance of pods resembling those of a large-podded Dwarf Kidney Bean; and from Mr. R. Headley, Stapleford, a small seedling Kidney Potato, which on being cooked proved very mealy and good-flavoured.

FLORAL COMMITTEE.—The subjects exhibited on this occasion were not so numerous as at some of the previous meetings, still there was a considerable variety in their character, and among them were several interesting plants. Messrs. Veitch sent *Dendrobium cinnabatum*, a free-flowering species, with white flowers flushed with lilac, produced in clusters of seven. To this a second-class certificate was awarded. From the Society's gardens came a number of plants of *Odontoglossum grande* in very fine bloom, and which, together with a neat specimen of *Oncidium pulvinatum*, proved very effective. For these a special certificate was given. Mr. Bull, Chelsea, sent a numerous group of plants, in which were several examples of *Clematis Jackmanni* and *Rubella*, ranging from 18 to 20 inches in height, showing the decorative character of these varieties as pot plants. Among Mr. Bull's other plants were *Ptychosperma regalis*, a handsome Palm, with leaves which when young have a coppery tinge on the upper surface, and are ribbed with red on the lower side; *Peristeria elata*, or the Dove Plant; *Zamia villosa*; *Dracena Cooperi*, with finely coloured foliage; a robust-looking *Lactaria* from Japan, awarded a first-class certificate; and *Aspidistra elatior angustifolia variegata*, with narrow leaves striped with cream colour. This also received a first-class certificate. Messrs. Carter & Co. had a special certificate for three plants of *Phalenopsis amabilis* in fine bloom; and the same firm sent a semi-double *Lilium auratum*, but which was much narrower in the petals, and not so beautifully marked as in the ordinary single form. The variety, however, will probably lead to better things. Mr. A. Parsons, Danesbury, Welwyn, sent *Gymnogramma peruviana laciniata*, a variety of Silvery Fern with the fronds much cut and densely powdered. It received a first-class certificate. A similar award was made to Mr. J. Stevens, Ealing, for Variegated Zonal Pelargonium Achievement, with finely shaped leaves having a broad bright and dark crimson zone on a yellow ground. He had also two other kinds, called Mrs. Stevens and Ealing Rival, both of which are promising, though as shown not equal to Achievement. From Mr. Crump came two seedling Pansies, respectively named Lord Lyons and Lily White, but not of sufficient merit to gain an award; and from Markham Spofforth, Esq., Porchester Terrace, Bayswater, shoots of *Jasminum officinale foliis aureis* grown in his garden, which was that of the late Mr. London, showing the identity of this Jasmine with the one exhibited some time ago. Mr. G. McDougall, Greenock, sent cut specimens of a white Zonal Pelargonium called Kate Bell, which is stated to be free-flowering and of dwarf habit, but it was not in good condition. Mr. Tillery, gardener to the Duke of Portland, Welbeck, exhibited a collection of seedling *Gladiolus* containing several showy varieties, but not superior to existing kinds. Mr. Standish, Royal Nurseries, Ascot, likewise sent a collection; and first-class certificates were awarded to Lady Alice Hill, rosy lilac shaded with white, and streaked in the throat with crimson; Lord Kenlis, crimson scarlet and very pale yellow; and William Menzies, with a fine spike closely set with flowers, in colour deep salmon, and slightly streaked with lake in the throat.

Messrs. E. G. Henderson, Wellington Nurseries, had a first-class certificate for *Veronica purpurea violacea*, with spikes $3\frac{1}{2}$ inches in length, in colour violet purple, and with more robust foliage than the other Veronics exhibited by the same firm, and which were Madame Bouchardat, *Azurea superba*, *Delfossiana*, and *Meldensis*. The whole were grown as standards. A special certificate was likewise awarded to Messrs. E. G. Henderson for a collection of *Lantanas*, of which *Ne Plus Ultra*, *Alba lutea grandiflora*, *Julius Cesar*, *Madame Dufoy*, and the old *Sellowii* appeared the best. The same firm sent a dwarf variety of *Lobelia Queen Victoria*, and pots of *Echeveria glauca*, *Sempervivum californicum*, which is tipped with brownish crimson, and has a very ornamental appearance in beds; also, *Sempervivum calcaratum*, and Princess of Wales, Duke of Edinburgh, and Edward George Henderson Pelargoniums, of the Gold and Bronze section.

Mr. Rawlings, Romford, had a first-class certificate for White

Bodder Dahlia, on account of its good qualities for flower garden decoration; and a similar award was made to Mr. C. Turner, Slough, for "Vedette," a show kind, with large magenta crimson blooms. He also sent Guardsman, Antocrat, Yellow Perfection, Prince Leopold, Reliance, Billy Button, and Master Johnny.

Mr. Green, gardener to W. W. Saunders, Esq., had a special certificate for a group of plants, most of which were more interesting than beautiful, and consisting of *Vanda recurva*, *Sarcanthus tricolor*, *Billbergia* sp., *Bahia*; a new *Tillandsia*, also from Bahia; *Oncidium abortivum*; a species of *Solanum*, from Peru; a Mexican species of *Myanthus*, with greenish-white, brown, and purplish flowers; a *Dorstenia* from Rio Janeiro, with silvery variegation in the leaves; and a new terrestrial Orchid from Bahia, having leaves with a pale green ground colour, spotted and mottled with brownish purple. To this a first-class certificate was awarded.

From Mr. Cripps, Tunbridge Wells, came a beautiful collection of Clematises. First-class certificates were awarded to Star of India, violet purple, striped with rosy purple; Marie Lefebvre, very large, delicate pale lilac striped with deeper lilac; Madame Van Houtte, very large, white; and Sensation, also very large, azure. Mr. Cripps also exhibited *Cupressus Lawsoniana flava*, a variety with a golden tinge, for which he received a first-class certificate; *Cupressus Lawsoniana nivea*, variegated with white; *Jasminum nudiflorum aureum*, of which some of the leaves were altogether yellow and others yellow variously mixed with green. Mr. Walking, Lewisham, exhibited Variegated Zonal Pelargoniums; Mr. J. J. Chater, Gouville Nurseries, Cambridge, a collection of Scarlet and other Zonal varieties; and there were also several well-grown plants of the best Zonal and Nosegay Pelargoniums from the Society's Gardens. Mr. Dean, Ealing, exhibited blooms of Dwarf African Marigold, of a very good stock, especially the Orange.

NORTH END FINCHLEY HORTICULTURAL SOCIETY.

It is always pleasing to find local horticultural societies flourishing, for such, when well managed, usually effect a large amount of good in their neighbourhood. We wish their numbers were multiplied tenfold. Their advantages are now so generally recognised, that it is scarcely necessary to remark that the good cultivation which they encourage is not only profitable in a pecuniary point of view, but morally and physically as well—morally by promoting habits of sobriety and a love of home, and physically by the healthful exercise and change of occupation which the labours of the garden afford to the amateur, whether of high or low degree.

The Finchley Society, under the presidency of Mr. Goodyear, is one of those societies which is making satisfactory progress. At its first show, two years ago, upwards of £27 was distributed in prizes; last year the sum thus expended amounted to £61; and this year, at the Show held on the 27th of September, we believe that the amount offered was somewhat greater. We visited this Show, not for the purpose of making any detailed report, but merely to satisfy ourselves as to the quality of the productions exhibited, and these we are glad to say were on the whole of great merit, the fruit especially so. Of Grapes there were several bunches of Black Hamburgh which would have done the exhibitors credit even at our large metropolitan shows. Mr. Bailey, gardener to F. C. Coxon, Esq., sent a fine bunch, weighing 3½ lbs., and Mr. Schoules, Mr. Thomas, Mr. Osborne, Mr. Paxton, and Mr. Kitley, gardener to Sir P. Grant, also sent good bunches of the same kind. The baskets of not less than 12 lbs. weight, from Mr. Schoules and Mr. Osborne, were also very good; so, too, were the Muscats from Mr. Osborne and Mr. Thomas. Mr. Schoules sent a fine heavy bunch, but not fully ripe. Among other kinds we noticed good bunches of Black Prince and Buckland Sweetwater. Several good collections of fruit were also shown; those from Mr. Lane, gardener to J. Miles, Esq., Friern Barnet, Mr. Pulling, and Mr. Osman, included some fine Peaches, Plums, Apples, and Pears, &c. Mr. Lane, Mr. Paxton, Mr. Kitley, and others also exhibited fine specimens of the last two fruits. Vegetables were well represented. Of flowering and fine-foliaged plants there were several healthy, well-grown examples, and among cut blooms some beautiful Dahlias from Mr. Gardiner. There were also several designs for flower gardens, executed with sand and cut blooms of bedding plants.

It may be remarked, in conclusion, that the classes were arranged in divisions, for gardeners and amateurs, for nurserymen and market gardeners, for cottagers, &c., so that all should have a fair chance.

DESTROYING WASPS.

I SUBMIT that Mr. Amos Beardsley's recommendation to destroy wasps in their nests with such an exceedingly dangerous poison as cyanide of potassium, although he said, "of course, caution must be used to avoid the inhalation of the cyanide," is one that had better not be followed, when the old method of a table-spoonful of turpentine placed in a wine bottle, and then the neck thrust into the entrance of the nest, will as cer-

tainly kill all the wasps as the cyanide. To save the use of a larger quantity of turpentine, a little earth should be heaped around the bottle's neck, and any other entrance, as sometimes there is more than one opening in the same way stoppered up. Do this at night when all the inmates are in.—W. A. W.

ORCHARD-HOUSES.

ANOTHER orchard-house season is almost passed with me, for, with the exception of Walburton Admirable Peach, all the good fruit which ripens without heat is gathered.

My fruit was never of better quality than it has been this year. From the middle of June to the middle of July we had Cherries such as I never before tasted; but amongst all the new ones there was none to equal the Elton—when grown as mine were it is a perfect sweetmeat. Then came the Apricots, sacks of perfumed honey. These who have not tasted an Apricot out of a glass house have no idea what an Apricot ought to be. I know I can appeal to every one who has tasted mine to bear me out in this. These have been followed by Peaches and Nectarines as good or better than in former years. Walburton Admirable is just ripening, as also a few of the late Nectarines; so that for three months we have revelled in good fruit without the assistance of artificial heat. Having many more Peaches and Nectarines than we required, I sent a large number to market, and received from 3s. to 4s. 6d. a-dozen for them—no bad price for unforced fruit in a provincial market. As usual, Grosse Mignonne, Noblesse, and French Galande have been superior to all other kinds. None of the new ones, though many of them are good and valuable as varieties, is nearly equal to these old favourites.

Amongst Nectarines, Rivers's Pine Apple is really a great improvement on Pitmaston Orange, which cannot be said, I think, of his Pitmaston Seedling, which too much resembles its parent. Pine Apple is not only larger but much higher flavoured. For a warm Peach-house—i. e., where artificial heat is used, there is no Nectarine to be named in the same day as Rivers's Victoria, a great bearer, large in size. It has much more of the Nectarine flavour than any of the old varieties, and no forcing will deprive it of its flavour, but in this climate it requires heat, and is not good in a cold house.

In reviewing the past, I feel sure we have all made a great mistake in removing soil from the surface of pots for the purpose of top-dressing, as it is very incorrectly called, with fresh soil. How any of us who have advocated keeping Vine and fruit tree borders undug and solid could ever have thought it right to clear out 2 or 3 inches of soil from amongst the surface roots of a pot plant I cannot think. However, we have given up the practice, and now trust to real top-dressings of manure and to manure water. I have tried a mixture of small chalk in my orchard-house soil, as recommended by Mr. Rivers, and think I can see an advantage in its employment.—J. R. PEARSON, *Chilwell*.

NEW BOOK.

Hearth and Homesteads, a series of Papers on subjects connected with Agriculture. By A HAMPSHIRE FARMER. London: J. Humphreys, Southampton Row, Holborn.

This small volume deserves the very rare character of being one hundred pages of sound sense. It is written also by that rare character a practical farmer, well educated, unprejudiced, and having literary tastes. He considers quietly and pleasantly "Education" of the labouring classes, their "Houses," and their "Wages;" and with equal ability he inquires "who the farmer works for," whether he should "clip cart horses," how he treats his "sheep," whether he should "hunt," and on what land "grass rather than corn" should be grown. In all these chapters, and in one on "Game and Farming," he is as equitable to the landlord as he is to the tenant and labourer; and so fair and temperate are his statements and opinions, that not a member of any one of those three classes could read them without having his own good opinions confirmed or his prejudices softened if not removed.

We will extract a few brief passages on some of the subjects we have enumerated.

"*Educating Labourers.*—The poor have minds as capable of improvement as ourselves, and should, in common justice, have the opportunity given them for it. I have often heard it urged that the fact of being able to read takes them to the public-houses to peruse the

papers. True, a few it may; but I uphold that, in the present cheap state of literature, many a one will instead buy a paper to read by his own fireside, and so be kept away from the alehouse. Instances of this have, indeed, frequently fallen under my own observation among those who had been educated. Moreover, with the continual improvements that are daily taking place in agriculture, and the implements connected with it, we want men who are capable of moving out of the old track of their forefathers. Manual labour is fast becoming a thing of the past. Machinery now does a great part of the work on a farm, and the men who are employed about it should be, at least able to understand in some degree the principle upon which it is worked."

"*Labourers' Houses.*—If horses, cows, or pigs die, it is a certain amount taken from the tenant's pocket. If we lose a good labourer, it does not appear to touch us in hard money, though perhaps it may do so indirectly more than we are aware of. Hence the difference; for the one we take care to provide sufficient shelter, the other in too many instances is left to take his chance. From what is here said, it is not to be inferred that I advocate letting the men have houses rent free. Such a plan is bad. The payment of a small annual sum gives him more interest in his home, and encourages a greater feeling of self-dependence, than would be the case where he had it for nothing. In fact, it is like everything else. What costs something is always more valued and appreciated than things that can be had without trouble or expense. Many landowners will not build cottages if they can help it; but no man wanting a farm should take it without ample accommodation for his men, any more than he would if there were no stabling for his horses. . . . We little think or know how much drunkenness and sin had and uncomfortable homes may cause."

"*Labourers' Wages.*—Would it not answer your purpose to make it worth their while to stay with you instead of going off to other work? You must come to it, or find yourselves left another day with only the useless lumber of your parish to do the work; you can't blame them. Look at a farm labourer's prospects, and say if you would not get away from them if you could. What are they? Hopeless, ceaseless toil for all the best years of his life to earn a comfortable independence in old age? No, no! either parish allowance or the workhouse. That is it; and there is no denying the fact. There it stands, plain before you, in the person of that old man, bent double with age and toil, picking out the last embers of his life on the parish road at a shilling a day. You complain that the people take no interest in their masters' concerns, nor care about their work. Let me ask, Can you expect them to do so? Put yourself in their place, and say, would you care with that prospect to do more than you could help when well-nigh worn out? Can you believe that a kind and good Creator ever intended a human being should pass a life of hopeless drudgery to attain no other object than just as much parish money doled out weekly as will keep him from starvation, until death mercifully comes to the rescue? If you can, truly your faith is great.

"No doubt, after all this, you will say, Show us the remedy. Well, I think it is a very simple one. When you take a farm, of course you calculate the different items of rent, rates, taxes, and labour. Now just calculate your labour at a rate that will enable your men to live as human beings, and save a little something besides. They won't all do the latter, I know, but many will; every year more as you educate them better. And then make your offers for farms accordingly. There is no occasion you should wring the life out of one class to put money in the pockets of another, which many of you are doing, leaving but very little to stick in your own."

EDGINGS FOR WALKS IN PLACES WHERE THERE IS NO VEGETATION.

It will, I believe, be generally admitted, that an edging of some sort is requisite in the case of all walks where appearance is an object; true, we often meet with excellent walks or pathways where there is not a vestige of a uniform edging, as, for instance, some of the public walks through the London parks, or some of those highways where the multitude cannot well be restrained from walking on the margins, and, consequently, destroying the boundary line. This state of things has led many of the managers of such walks to adopt means to keep the public from trespassing, and caused an evil quite as unsightly as that which it is sought to remedy; for now and then we find a walk with a small ditch at each side, and the ground beyond this ditch guarded by cross fencing, or in some other way. There are, however, some places where it is advisable to define the portion allotted for the walk from that intended for other purposes, and here a kerb or other demarcation is necessary. Circumstances usually define what this should be; but there are some private places where hints on such matters may be useful.

In the first place, I will commence with positions, in which a live edging cannot exist, such as dark or shaded shrubberies, or spots overshadowed by trees, but in which it would be desirable to define a walk, or what should be one, from the naked earth which bounds it on each side, for the ground must

necessarily be naked where no low vegetation exists. The materials for this purpose are numerous enough, embracing a wide variety of substances—stone of every kind, dressed and rough; the refuse lumps from the iron and glass furnaces, as well as sometimes prepared materials from thence; slate slabs, wooden boardings, composite edgings of all kinds, and an infinite variety of earthenware ones, all more or less pretty or available, as well as innumerable substitutes of local occurrence, and which for the most part being only to be had in the particular district, little can be said of them.

In some of the mining districts, where quartz, or spar as it is often called, exists in quantity, it is not unusual to imbed or partly fix in the ground a line of these pieces as nearly of one size as they can be obtained, and the brightness they present in sunshine obtains for them a great many admirers. Pebbles from the seashore, or from the bed of a river, are used in the same way, and the same may be said of flints where the latter are to be found. In fact, flints have been employed for another purpose of a somewhat similar kind, for the names of railway stations are sometimes delineated on suitable banks with this material, painted and kept white. In the garden, or for the edgings of walks, colouring flints white is unnecessary, as too much glare is offensive. Clinkers of certain kinds are also used, but more generally where glass or some metallic substance enters into their composition; in the latter case they are often worked into fancy rockeries. Other materials of a like kind are also occasionally met with, and now and then boarding, rough or planed, but from its liability to decay we seldom see it employed except to a limited extent, or for some special purpose.

I now come to manufactured edgings, which are also numerous. Amongst them I have met with some good examples of iron and wire like basketwork, but these are best adapted for places where there is vegetation, to partly conceal them, and are not at all suitable for the edgings of a walk underneath trees, or where there is much traffic. Stone kerbing is much superior, and is of several forms; but the plain round-edged, some 3 inches in thickness, is about the best. I have also seen the same kerb with a flat top, the edges only very slightly chamfered off. When this is buried flush with the ground, it is, perhaps, the best shape of any, and if there is a great length of it, a thicker kind may be adopted. The artificial stone kerbing is often moulded into a variety of forms, but in places to which the multitude are admitted plain patterns are best. There are, however, some pretty designs in this way, and the same may be said of earthenware; the latter, however, is not so desirable on account of its colour, but it is, nevertheless, often used, as it has been more extensively manufactured than the artificial stone, against which there seems to be some prejudice; not always well founded. In the earthenware class of edgings it would be better to adhere only to simple forms, and avoid all pointed, notched, and beaded tops, which are liable to breakage, or to become so covered with dirt, that all the beauty which they possess is destroyed. A plain, square, angular, or rounded edge is infinitely better than any elaborate carving, and is that which I recommend.

One of the cheapest and most readily obtained edgings which I have ever met with, is the common brick, laid in a slanting position, so that its side and edge may each present an angle of 45° to the horizon, and as the greater part of the brick is under the ground, or in it, it becomes very firm. Here we lay the diagonal brick as an edging to all walks, where the continuance of a live edging is uncertain, and even in places where an edging will grow, we not unusually employ the brick also, as most plants laid down by the inner side of it grow freely enough. In fact, I often have it by the side of walks that have a turf edging, the latter being kept correct to shape by the edging of brick; and the top or angle of the brick being no higher than the surface of the turf, there is no impediment to the mowing. Brick edgings on this plan may be laid by the side of most walks, as their steadiness prevents their suffering much, and the red glare of the brick (if it be that colour at first), quickly softens down to the ordinary colour of the ground or gravel. If properly put down at first, such an edging rarely becomes deranged, unless the ground settles, or where there are some other mishaps, as the roots of a tree upheaving it. These cases, however, are not sufficiently numerous to constitute a serious objection, and I have every confidence in recommending good, hard, well-burnt bricks for edgings, as being cheaper than any other artificial substance. Perhaps, however, where an outline for a walk through a much-frequented footpath is wanted, a line of hard stone—say at least 6 inches in width at top, laid flat, is about the best in the long run, as it often

happens that the ground behind it is invaded, and the stone edging, even where it is disregarded, is still a sort of outline, and shows that the public, and not the original maker of the path, are the parties at fault. It is, however, a much more expensive material than bricks, which in most private places will be found to serve all the purposes of an edging, and if care be taken to select good, hard, well-burnt bricks, their durability is scarcely less than that of stone.—J. ROBSON.

A SOMERSETSHIRE STILE.

As the merits of the Cornish stile have been discussed in the last few numbers of your Journal, and according to your last correspondent, "CORNUBIENSIS," in a manner not altogether favourable to its adoption, I venture to call your attention to an invention of my own, which I have had in use for nearly two years, and which has been found to answer every purpose for which a stile is required, even to a free passage of your correspondent's "departed crinoline."

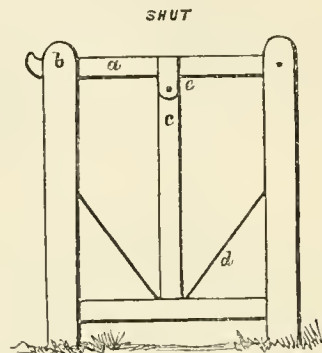


Fig. 1.

You will observe from the above engraving (*fig. 1*), that it is very simple in construction, and entirely self-acting. It has no fastening, as the cross-bar (*a*), after being lifted up for the person to pass through, falls back to its place in a slit in the post (*b*) by its own weight, so that it cannot be left open, a great desideratum in stiles and gates of all kinds.

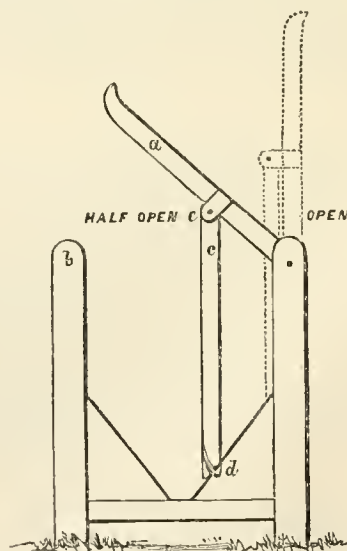


Fig. 2.

When the bar (*a*) is lifted up (see *fig. 2*), the pendant (*c*) turning on a pivot (*c*) naturally rises with it, and runs up the bar (*d*), to which it is fastened by a ring at the bottom, thus leaving a

perfectly clear space between the posts for a person to pass through. The stiles are made of iron and wood as required, and are found to answer well in other places besides this, as the orders now rapidly coming in abundantly testify. It is patented.

I send you also an illustration of another very ingenious stile invented by my brother, which is very suitable for gardens, as a wheelbarrow can pass through.—GODFREY STYLITES.

THE NEW ROSES.

In the autumn of 1865 fifty-six new Roses were announced by the French growers—namely, two Tea-scented, five Bourbons, and forty-nine Remontants (H.P.'s). Most of these were propagated and distributed from the English nurseries in the spring of 1866. They are, therefore, known among Rose-growers and amateurs as the '66 Roses. The season of the present year has proved to a great extent what they are; at least nearly enough of them is known to be able to note those worth cultivation.

As in previous years, many of them—I feel no hesitation in saying the majority of them—will not meet with great favour for any length of time, and, like so many of their predecessors, will soon cease to be propagated. This has invariably been the case year after year, and will continue so till the *furor* for Rose novelties is restrained within reasonable limits, and time allowed to prove new kinds before they are uselessly and extensively propagated.

The most obvious merits of the '66 Roses, on the whole, are richness of colour and vigorous growth. In one or two instances to be presently noticed a new shade of colour has been obtained, but not of a very decisive character, nor coupled with symmetry of form to such an extent as to give them a place among first-class Roses. Several others are of a colour we already possess in older varieties, without showing any marked improvement in other qualities. The prevailing defects are irregularity and roughness of form, which are now the more objectionable, since the introduction of many fine Roses that combine beauty in shape with brilliancy in colour and size.

Opinions may, and do, differ upon the qualities of any particular flower. Some would bestow upon it the highest praise, while others would reject it altogether. This is especially the case with Roses. There is no established standard of excellence set up so that all may be judged from it accordingly, nor is any such likely to be. Hence the diversity of opinion constantly met with, and not without advantage. No one denies a first place to such Roses as Charles Lefebvre, Sénateur Vaisse, Gloire de Dijon, Leopold Premier, Chabillant, and others; but a host of other kinds have had very opposite judgment passed upon them. If, therefore, any one offers a critique upon any flowers on his own responsibility, the principles upon which his or her judgment is founded should be stated.

What constitutes a good Rose? has been to me an oft-repeated question.

I deem the following points essential:—

- 1, Brilliancy (richness) or delicacy of colouring, or both.
- 2, Symmetry in form.
- 3, Size in connection with the preceding.

These three refer to the flower; but to make the flower worth the trouble of cultivation in our climate there are also requisite

- 4, Vigorous habit or strong constitution.
- 5, Free-blooming qualities.

Colour as an essential point is too manifest. Any Rose with a dull or unattractive colour would be rejected without regard to any other quality. Instances of miserably-coloured Roses being sent out are not unknown. For example, *La Reine des Violettes*.

By symmetry in form it is not intended to imply mathematical accuracy in shape. The only approach to such must be the perfectly circular outline of the outer petals in cupped and globular Roses. Flat ones are now but slightly esteemed, and where the two forms are combined, the true circular outline should be readily recognised. The petals should have the edge entire, whether erect (Charles Lefebvre), recurved (Comtesse de Chabillant), or incurved (Céline Gouod). The very best, however, generally show a slight indentation in the outside petals. Notched and ragged petals are glaring defects. A Rose with petals greatly incurved often fails to show its true colour, and is frequently a bad opener (Josphine Beauharnais). One

with petals excessively recurved has a rough and displeasing appearance (William Rollisson).

Size is too often attained at the expense of fullness (Général Jacqueminot). A yellow "eye" in a Rose is an eyesore; "large and full" is a common expression not always correct; a thin centre is a usual occurrence under the highest and strongest culture.

Vigorous habit is essential, that the plant may withstand the vicissitudes of our climate, without being rampant and of unsightly growth, conditions not favourable to the production of abundant bloom (*La Tour de Crouy*): the foliage should be full, the leaflets large. All small-leaved kinds are of little use (*Alba mutabilis*). Weak and uncertain kinds should no longer be offered for sale nor exhibited.

Free-blooming quality is not less important than vigorous habit. The value of a Rose bush is materially lessened if it only furnishes three or four blooms a-year, even if good (*Clemence Joigneux*). It should be literally remontant—that is, sending up a succession of bloom during the season, from June to November.

Charles Lefebvre, Sénateur Vaisse, Gloire de Dijon, William Griffiths, Alfred Colomb, Madame Victor Verdier, Lord Macanlay, Pierre Notting, Jules Margottin, Comtesse Cécile de Chabillant, Duchesse de Caylus, Leopold Premier, Prince Camille de Rohan, possess all these qualities in an eminent degree. Close upon them follow Beauty of Waltham, John Hopper, Maurice Bernardin, La Ville de St. Denis, Comte de Nanteuil, Maréchal Vaillant, Dr. Andry, Caroline de Sansal, Adalide, Marguerite de St. Amand, Madame Caillat, Leopold Hausburg, Adolphe Rothschild, and some few others.

Essential as these points must be deemed, because having obtained them in the above-named varieties, it would be retrograde to estimate a Rose as being good with any of these qualities deficient. Yet in judging Roses at the great Rose shows, some of these important items have been occasionally lost sight of or ignored, which has been a matter of surprise to me. It has not been an uncommon occurrence that a stand of really good Roses of the best kinds has been passed over for one that had larger blooms, or, perhaps, in a trifle better condition than the other, but at the same time had many inferior kinds exhibited.

It is quite possible that another season may show some of the following kinds to better advantage. There are many Roses which do better one year than another; where good qualities are promising, further trial should be accorded.

Alfred Colomb, the premier Rose of last year, of perfect form, combined with brilliancy of colour. It equals Charles Lefebvre in its free-blooming qualities and vigorous habit, and will be indispensable in the rosery, and even in small collections. To M. Lacharme, the raiser of Charles Lefebvre, belongs the honour of sending out this truly superb Rose.

Jean Cherpin is a valuable addition to our dark Roses. To say that it is perfect would not, perhaps, be correct; being large it requires high culture to make it full.

Camille Bernardin, although one of the numerous progeny of Général Jacqueminot, is far superior to its parent. Its colour is somewhat common; but the fine blooms of it here, and those I have seen in other places, were so round and full, with a glowing red centre, surrounded by a cup of light-tinted petals, that I do not hesitate to assign it a first place.

Exposition de Brie has a great resemblance to the last, differing by a shade or two in colour. Very beautiful. Camille Bernardin and Exposition de Brie obtained medals of merit at the great Rose Show at Brie in 1865.

Madame Fillion, as a flower, must take a first place, although the constitution of the plant has not yet proved so strong as could be wished. It is, undoubtedly, the finest salmon pink Rose yet out; beautifully cupped. Those who remember its parent, Madame Damage, will readily appreciate Madame Fillion by its superior colour and form.

Mlle. Marie Rady is another red Rose of great merit. I have not as yet found in it anything very distinct from others of the same colour to mark it otherwise than a good Rose.

Charles Rouillard and Mlle. Marguerite Dombrain I have not seen on the living plant, the proper place, as Mr. Rivers justly observes, "to see Roses aright." Both of them, especially the first, have received the approval of competent authorities; they should, therefore, be accepted. The cut blooms at the Crystal Palace Show were superb. Charles Rouillard is the best of the ten Remontants sent out by M. Eugène Verdier last year; Mlle. M. Dombrain is also his. Not much can be yet said in praise of the others, which are—

Alba mutabilis, a failure in this garden. Petals thin and loose, habit weak and straggling; poverty-stricken.

Fisher Holmes resembles *Charles Lefebvre* in colour, but is inferior in all other points; much too thin in the centre.

Jean Lambert will please those who delight in large showy flowers of dazzling colour, and are willing to overlook defect in shape. It will be esteemed as a good garden Rose.

William Rollison is of fine colour, quite distinct from any other variety—described as cerise rose. One of the kinds in which a new shade of colour has been obtained. The petals are excessively recurved, which gives the fully expanded flower a rough and unpleasing appearance.

Souvenir d'Abraham Lincoln, purplish crimson, flat and rough.

Prince de Porcia, deep vermilion; another instance of magnificent colour. It appears to be defective in form and fullness. Another season may bring it out better.

Jean Grier and *Professeur Duchartre* I have not seen.

Gloire de Ducher (Ducher), seems more remarkable for its vigorous growth and large flowers than for any particular merit in them.

Comte Alphonse de Serenye is very pretty before complete expansion; when fully open it is rather flat, but large and showy. Colour clear red, slightly tinged with purple.

Carl Coërs is only an indifferent repetition of the old *Léon des Combats*, hard to open; very rough.

President Mas, another of the brilliant red Roses; free bloomer, but not of good shape.

Pline, large and loose, of no merit.

Marella requires further trial; not sufficiently remontant.

Madame Baptiste Desportes, form of *Comtesse de Chabillant*, but darker and inferior.

Souvenir de Dr. Jamain has not that symmetry of form that could be wished for in connection with its fine colour, which is new, having more of the bluish purple tinge than any other Rose. It will be highly esteemed till a more perfect Rose of the same colour appears.

Joséphine de Beauharnais is occasionally very beautiful when well expanded. Its petals are so much incurved, that it will only open well under favourable circumstances, the outer petals dying off before the centre of the flower is sufficiently visible. Such is my experience of it here.

Chevalier Nigra is very pretty, but not particularly striking from others of the same colour—pink.

Madame Charles Baltet, one of the *Louise Odier* type. A very pretty pale rose variety, larger and less formal than its parent.

I wish to be allowed to correct an error of one word in reference to *Maréchal Niel*, at page 236. I ought to have stated that the leaves of the inferior kind were less pointed than the true one. Any one who has noticed a thriving plant of the true *Maréchal* cannot have failed to remark the extra fine light green foliage, with the leaves much pointed (acuminate), like those of *Cloth of Gold*, but more so.—ADOLPHUS H. KENT.

EMPLOYMENT OF FLOWERS IN AMERICA.

FLOWERS are material in substance, yet they may be said to be the nearest approach of the material to the spiritual. In their true nature and use they are neither to be worn, or bought, or sold, or prostituted for vulgar display.

By their innocence and spotless purity, by their subtle odours, by their marvellous mechanism, they are designed to lead from the seen to the unseen. Frail, transitory, artless as they are, they yet have the strange fascination and power to transform, to refine, and to inspire the strongest, nay, even the coarsest natures. This influence is not tangible; it is, indeed, so subtly imperceptible that it is rarely recognised. Yet who can doubt that in all the country homes of our fair land the pervading presence of the bright and cheerful flower-plat has had an elevating and a refining influence which in the aggregate has been mighty for good? With what wealth of prodigality are the hill-sides and the meadows decked with Daisies, Asters, Golden-rod, and the myriad forms of beauty and joyous innocence in which even our Creator seems to take delight, as He scatters them with such bountiful profusion over the earth!

How shall the use and the influence of flowers be extended in our cities and large towns? This is a practical question, deserving careful consideration. The present value of the flower trade is much larger than is generally supposed. A few

items may be mentioned as indicating the extent and the peculiarities of the trade. In our larger cities it is no uncommon thing to supply flowers, at a reception, a bridal party, or a funeral to the amount of 200 dols., or 300 dols. Indeed, this is often exceeded in New York; one reception party being mentioned where the flowers alone were valued at 1500 dols. On New Year's day, 1867, one of the principal New York dealers sold flowers to the amount of 6000 dols., and the entire sale in the city on that day probably reached 50,000 dols. One of the most prominent and reliable florists of New York estimates his crop for the past year as follows:—Camellias, about 45,000; Bonvardias, about 20,000; Carnations, about 70,000; Double Primroses, 100,000; Violets, 100,000; Tuberoses, 50,000. Eupatorium, Poinsettia, Cape Jasmine, Stevia, Heliotrope, Cissus, Rose, Geranium, and other plants in considerable quantity.

A slight index of the trade is seen in the fact, that the four or five principal New York florists each use wild evergreen, or Ground Pine, as it is commonly called (*Lycopodium dendroideum*), to the amount of over 4000 dols. annually. Judging from these items, together with such other estimates as I have been able to obtain, I incline to think the total annual amount of sales of flowers in New York is about 400,000 dols. After making considerable inquiry, I come to the conclusion that the annual sales in Boston will amount to about 200,000 dols.

Extending this basis to the other cities of the Union, we have some impression as to the magnitude of this interest. Were these figures an index of taste and a genuine love of flowers we might well be satisfied and felicitate ourselves upon the cultivation and refinement of our people. But we have to go deeper and examine the character of this trade. It is the statement of the principal dealers that the larger part of their sales is for bridal parties, for receptions, and for funerals, or in other words for the purpose of display. The genuine love of flowers is often entirely wanting in this display. And if to this use we add the important item of gift bouquets, we shall see that there are few who buy, *con amore*, for home enjoyment. Let it not be understood that we object to the use of flowers for ornament and display. Nothing is more fitting, in all places and upon all occasions, provided good taste is observed in the arrangement. The fact that some drawing-rooms are bedecked with flowers, gaudy, glaring and obtrusive as the hostess of the occasion, or that a bouquet in the hand of a corpse only serves to make death appear more hideous, does not change the rule that these simple gifts of nature are most perfect ornaments of the parlour, and the most touching emblems at the grave. If it is true that a desire for display is offensively apparent and shocks us at the funeral service, yet in general this use of flowers is wholesome and should be encouraged. Our aim should be that this use should be improved and the public taste be educated and refined.

Florists have a work to do in this regard. For example, take the prevailing style of flower pieces in New York. It is the offspring of this general desire for coarse, stiff, vulgar, unnatural display. "An even surface," is the inflexible rule. And so the wide-faced Camellia and the tiny Cyclamen, the delicate Rose-hud and the ragged Carnation are built up with *Lycopodium*, to a solid, even surface; and thus the poor innocent flowers are so transformed from their true nature as to glare any sensitive soul quite out of countenance. This arbitrary rule applies to bouquets, baskets, and all kinds of work, to a surprising degree. As a consequence, naturalness and grace are at once and for ever abandoned qualities; size and colour are the *sine qua non*; long stems are shortened, short stems are wired up, the Camellia is advanced to the rank of queen, and the modest *Ericas* and *Stevia* are lost in the dazzling brilliancy. Undoubtedly this style favours the utmost breadth and contrast of colour, and is the most economical use of material. It also allows great variety in form, curious shapes and devices, hearts, crowns, monograms, initials, ribbons, &c., &c. In some cases and to a degree these unnatural and artistic effects are striking and pleasing. They are clear and positive and unmistakeable in their character. On the lawn or in the garden, we feel the necessity for distinctness, breadth, and strength of colour. To this end the ribbon style of planting is to some extent in vogue. Harmony and distinctness in colour are equally desirable in flower pieces, but the work need not, nay, must not be staring and obtrusive. Let the motto be naturalness, and the highest art will be attained. Seek in all work to preserve as far as is possible the individuality and characteristics of each flower. The true beauty and the true meaning and influence of flowers will then be felt. Or, if otherwise, if flowers are arranged

merely for gaudy show, then in time their use will to some extent become vulgar, and be in a degree coupled with gaudy tapestry and gilded walls and pretentious paintings and other glaring insignia of the suddenly rich. While New York and Philadelphia are in advance of Boston in the extent and skilful culture and generous use of flowers, I must be permitted to add that an important lesson may be learned from the latter city in taste and art in using these floral products.

A practical and important point remains to be considered. It has been stated that a large proportion of the flowers used were for the purpose of display or because custom required it. The result of inquiries leads me to estimate that nearly one-half of all the flowers sold in New York are for balls and festive occasions, which is a much larger proportion than in Boston. Probably about forty per cent. are for bridal and funeral purposes, the latter being considerably in excess of the former. But when you ask what proportion of flowers are bought in single pieces, for nosegays, or as small bouquets for quiet home enjoyment, you are told that the amount is so inconsiderable that most dealers do not care to trouble themselves with this small item. Instead of finding the largest use in this true way, it is considered an insignificant and scarcely desirable branch. For this result the florist, the dealer, and the public are answerable in common. Heretofore flowers have been produced at too high cost. They have been grown in costly houses, or on a limited scale, so that only a reasonable profit has been realised when the shopmen have retailed Camellias at an average of 50 cents, Roses at 12 to 20 cents, Carnations at 10 or 12 cents, Bouvardias, Heliotrope, Eupatorium, and trusses of similar character at about 6 cents. Now these prices do not seem high and yet they are too high to allow the common use by common people and in generous quantity. But this is the use which is most genuine and healthful—by far the most important to the public, and we can but think it may be made a large interest to the florist, provided he will do his part in elevating the public taste and meeting this honest enjoyment of flowers at reasonable prices. Steps are taken in this direction, especially by the Germans around New York, who grow cheap flowers, which are made into nosegays by the housewife, and which are sold at the ferries, hotels, and in the streets, during the warm months, at 10 to 25 cents each. This is well; but this is not sufficient. A higher grade of flowers should be brought into use, and the principle should be applied to the winter months also. That there is no difficulty in doing this we may easily see.

But there are two difficulties to be met. The dealers are not inclined to enter into this small trade, not merely because of its smallness, but more especially because the common use of flowers would in their opinion make them unfashionable. It is with a feeling of indignation that we must admit that there is some force in this view. Yet the products of our greenhouses are of such rare and exquisite beauty and grace that they may well be described as "indispensable." The rulers of fashion cannot afford to place them under ban. Moreover there are many kinds of flowers so rare and costly, that the foolishly extravagant may find ample latitude for invishing their wealth without coming in contact or competition with the more humble lover of Nature. Are diamonds out of vogue because the servant girl is profuse in the use of glass brilliants? But a more serious difficulty lies in the fact that there is so little real appreciation and fondness for flowers. Here is where the educating process must be begun and carried on. Many influences may be brought to bear and very positive results may be expected to flow from this practical philanthropy.

It must be a work of time to introduce flowers to general and familiar winter use. Yet this can be done. Let our florists aim for cheap production, let them attempt to cultivate a more correct taste, let them endeavour to gain more direct access to the public, and in time they will find that these now-despised drops will out-measure the costly orders of the wealthy. Let them learn a lesson from their own art, seeking to extend the refining influences of flowers—not content with profit in business merely, but aiming also to be real benefactors of mankind. To develop or extend the influences of Nature is, in a sense, to enter into work of the Creator.—W. C. Strong (in *American Gardener's Monthly*.)

WHAT IS A SHRUB?

At the Bury Petty Sessions on the 19th of September, the following case came before the Mayor and Magistrates.

Alfred Fisher, gardener to Mr. Burrell, Westley, was charged

with cutting, with intent to steal, a part of a shrub exhibited in the Corn Exchange, the property of the Rev. R. Benyon, on the 13th inst. Mr. Grieve, gardener to the Rev. E. R. Benyon, Culford, said: At the Horticultural Society at Bury last Friday, I exhibited for Mr. Benyon the plant of the Lady Calium Geranium which is now produced; I saw it placed on the table in the Corn Exchange; it was then in a perfect state. Late in the day my attention was called to it by Mr. Head, and I then found that a branch had been cut off; the part cut off was likely to germinate, and had been taken off recently; it wet my finger as if I had put it into water; I should say it had been cut within an hour; the cutting would have been worth 15s. if it had been struck. I call the plant a greenhouse plant; I do not call it a tree, nor a sapling, nor underwood, nor a shrub—I call it a plant grown in a greenhouse—a tender plant.

Thomas Head, boot-closer, said: I was at the Horticultural Show on Friday, and I saw this plant exhibited there. I saw the defendant looking at the back part of the plant—not where all the people were. I saw his hand up to the plant. I saw him take his hand away with a cutting in it, put it into his pocket and walk away. I did not know Fisher—only by sight. He walked away down the Corn Exchange; about a quarter of an hour after I met Mr. Grieve, and had some conversation with him. I was going with Mr. Grieve in the direction of the plant, and I pointed out the defendant as the man who had taken the cutting. He had two plants under his arm, which he took to his van outside the door. He went into the van. It was covered, and I did not see him when he was in it. Mr. Grieve was with me. I am certain defendant is the man who took away the cutting. I have known him from seeing him at horticultural shows this season and last.

Mr. Pettitt, lessee of the Botanic Gardens, said: A Geranium is a plant or shrub. I produce the plant which I received from Mr. Grieve on Friday last. I examined it at that time, and I found it had been recently cut, in the very place where I should have cut it myself; it was cleanly cut, and certainly by a man who understood it. I have frequently called a Geranium a plant or a shrub. A shrub is a low-growing plant. I believe a Geranium is a shrub within the ordinary meaning of the word. I ground my opinion on Loudon's "Encyclopædia," and on every authority that I have known, and from what I have been taught.

Mr. H. Turner, Beech Hill, Bury, said: I understand gardening. I should designate a Geranium as a dwarf shrub. It is not a very common thing to call a Geranium a shrub, nor an uncommon thing. If you were to class it I do not know where else you would put it.

Mr. Salmon proceeded to address the Bench for the defence. He characterised the offence charged against his client as one of the most dastardly and cowardly which a gardener could commit, and one deserving of the severest punishment. It was, therefore, very important to the defendant to clear himself from the imputation, and he hoped ultimately to have a decision in his favour upon the facts. The case entirely rested upon the witness Head; and he would not impute to him a wilful misstatement, but he would urge that he must have been mistaken. The defendant could derive no benefit from stealing this cutting, for he was not a trading gardener making money by his plants. He was in the service of a gentleman than whom no man in England would be more ready to pay for any plants he required, and would be the very last man to admit into his house a plant obtained in this manner. It was a most unlikely thing that the defendant should, while the Corn Exchange was full of people, and with the witness Head standing right opposite to him, take the cutting as alleged. Mr. Salmon then read a testimonial from Mr. Burrell, stating that the defendant had been in his employ for two years, and that he believed him to be an honest, industrious, and hard-working man, and that he had filled his situation to his entire satisfaction. Mr. Salmon further said, that although he felt confident of a verdict on the facts, he was bound also to draw attention to the law, and he contended that a Geranium was not a shrub, that Mr. Grieve was right, and Mr. Pettitt and Mr. Turner wrong; and that even if it could be by any possibility dragged into the class of shrubs, it was not such a shrub as was contemplated in the Act of Parliament, which classed shrubs with "trees, underwood, and saplings."

Mr. Walpole having replied upon the point of law, the Bench deliberated and decided that in their opinion a Geranium was not a shrub within the meaning of the Act. The case was consequently dismissed on that ground. Mr. Walpole then applied for a new summons under another Act of Parliament and it was

granted, and the case was fixed to be heard next Thursday week.

[There is no substantial ground for the opinion that a Pelargonium (commonly called a Geranium), is not a shrub. It is clearly within the definition given by all competent authorities. Thus Professor Henslow says:—"Shrubs are woody plants, which do not form a trunk like trees but have several stems,"]

Although a Pelargonium is a shrub, yet the Magistrates were quite right in deciding that the plant in question was not a shrub within the meaning of the "Malicious Injuries Act." That statute (7 and 8 Geo. IV., c. 27), was for preventing any injury being intentionally done to trees, shrubs, saplings, or underwood, growing in a park, pleasure ground, garden, orchard, or avenue, or in any ground adjoining or belonging to a dwelling house. In fact the provision of the Act was to protect plantations from wilful damage. It has no relation to potted plants. If Alfred Fisher cut off and carried away the branch of the Pelargonium he was guilty of a felony.—Ens.]

WORK FOR THE WEEK.

KITCHEN GARDEN.

THE growth of weeds, favoured by the late rains, should be forthwith checked, and the quarters should be made to exhibit a neat appearance, for this cannot be so well effected should a period of constantly damp weather set in. *Cabbages*, prepare a piece of ground for the main crop for next May, June, or July. Let it be thoroughly manured and trenched, as the plants will have to remain perhaps eighteen months on the same spot, for if well managed they will, after cutting, produce a most abundant crop of winter sprouts of the Colewort character. If ground and plants are to spare, we would advise a large quantity of Early York being planted out in well-manured beds or borders, at about 6 inches apart. These will be "in cut" before the early Cabbages come in, perhaps by the end of March. *Cauliflowers*, the plants sown in August will be getting gross; they should be removed forthwith. Some persons pot them, which we consider an excellent plan for the earliest lot. They may be kept thus in a cold frame or pit until the early part of February, when they may be planted under hand-glasses. Those for succession crops, if becoming too strong, may be pulled up and thrown on the ground for half an hour to check the fibres, and then pricked out where they are to remain, in poor soil. *Lettuce*, follow up the pricking-out of winter sorts, keeping the ground much elevated. *Potatoes* greening for sets should be housed when perfectly dry; after the process has been sufficiently effected, and if room enough can be afforded, they should be spread out rather thinly. *Turnips*, let the latest-sown have a thorough thinning and weeding forthwith.

FRUIT GARDEN.

Most of the Peaches and Nectarines on walls will have been gathered; it will strengthen the buds on shoots intended to be trained for fruiting next season if the wood which has borne in the present year be cut out, provided such do not form part of a branch necessary to be retained for the extension of the tree. Continue to gather Apples and Pears, many of which appear not disposed to hang long, although their usual degree of perfection has not been attained. In storing, whenever an extensive surface of fruit is exposed, air must be freely admitted, for at this period of the season exhalations are most abundantly given out, and more especially by the early varieties on their becoming fit for use. These, in fact, ought not to be in the same apartment with the more valuable late-keeping sorts.

FLOWER GARDEN.

Some of the more tender and choice plants in borders and beds, if wanted for store plants, should now be potted and placed in a close house or frame until they are rooted, when they may be removed to their winter quarters. *Anemone* roots should now be planted in beds and borders. Those that have remained in the ground all summer, and that are now coming up, should be examined, and if grubs are destroying them care must be taken to clear off the grubs before the roots are destroyed. Plants dying off in borders should be removed, and seeds collected on fine days and stored away in wet weather. The time is at hand for alterations and the planting of choice shrubs, and those who are unwilling to think of such matters whilst the present fine weather continues, will have their memory

refreshed when frost arrives. When extensive alterations are contemplated, more especially in the flower way, it is requisite that all possible observations be made before the flowers lose their character, and the trees and shrubs are stripped of their foliage.

GREENHOUSE AND CONSERVATORY.

Chrysanthemums intended for the decoration of the conservatory should be placed under cover at once and receive every attention. Regular watering is one of the most important matters, for if they are allowed to become dry, if only for an hour, decay or yellowness immediately takes place in the under leaves. They will from this time enjoy liquid manure constantly, provided it is perfectly clear and weak. All suckers should be pulled away as they appear. See to thorough staking here and the extermination of all insects; there can be no good gardening where insects are allowed to establish themselves. Large specimens of the following make a fine figure at this time:—*Buddlea Lindleyana*, *Gesnera lateritia*, *Salvia patens*, *Begonia incarnata*, *Phlox Drummondii*, *Ipomœa filicifolia* (trellis), *Thunbergias*, *Plumbagos*, *Justicias*, *Clerodendrons*, &c. In the greenhouse, Stocks and Mignonette sown a few weeks ago may now be transplanted, especially the Stocks. If an early bloom is desired, half a dozen plants may be put in a well-drained five-inch pot. The last shift should now be given to forward *Cinerarias* intended to bloom this autumn and early in spring; use most liberal drainage, and put them under cover close to the glass, with a free circulation of air. The *Tagetes lucida* is a good late flower; although of long standing it is not so generally known as it deserves, and grown in pots it makes a good display in November, the flowers being of a rich yellow. Look after self-sown annuals, and transfer some choice ones to pots to decorate the house in March.

STOVE.

Forcing must be avoided as much as possible, still the cold nights must not be permitted to affect the temperature, so as to check materially the declining growth; let winter treatment be brought on as quietly and naturally as you can; to accomplish this without sensibly affecting the healthy appearance of your plants is a great desideratum, and with care quite within the power of the anxious cultivator. Young stock of *Begonias*, for winter flowering, may still be shifted. Some of the bulbous tribes will now begin to start from their dormant state, and some will speedily show blossom; such, when fairly started, if pot-bound, may receive a shift, using a compost of sandy loam and vegetable matter. A little bottom heat would be of service after this operation. Keep the atmospheric temperature moderate at this period, encouraging a liberal ventilation.

FORCING-PIT.

This important, indeed indispensable structure now begins to claim attention. It may be termed the workshop of decorative horticulture, for it is out of this department that ornament and perfume must be obtained. Greenhouses and conservatories always afford some flowering specimens, even in the middle of winter; but aided with this auxiliary, they may be stocked at all times during the winter and spring months with suitable subjects in bloom. Take in an ample supply of all kinds of shrubs fit for this purpose, pot them, and plunge them in old tan. This will apply more particularly to American plants. All kinds of Dutch bulbs must also be immediately potted and plunged in a convenient situation ready to be removed, when wanted, to the forcing pit; a few of them may at once be excited. Lily of the Valley should be potted for the same purpose, so that an uninterrupted supply of this favourite flower may be had during winter. *Mignonette* will also be required for early winter-flowering. This must always be protected from rain and frost, and as the plants advance they should be placed in the forcing-pit to bring them into flower.

PITS AND FRAMES.

Early-struck cuttings should be removed to shelves in greenhouses or pits for the winter. If cuttings are now taken from *Chrysanthemums* showing bloom, put three in a 48-sized pot, and, placed in a nice heat, they will soon root and bloom beautifully for decorating the fronts of stages or clumps; large plants in pots should also be set under glass before the frost destroys them. All cuttings that are now required must have more heat and air to prevent damping off; but it is to be hoped that all propagation has been attended to by this time, as young stock propagated late is almost sure to damp off in winter. *Verbenas* and all early-struck cuttings should have air at night to keep them hardy; but the lights must not be suffered to be

off for fear of wet or frost. Watering must now be done in the morning, and sparingly.—W. KEANE.

DOINGS OF THE LAST WEEK.

What a remarkable end to the month of September! and what a blessing to late places in the north of our land where the harvest had not been garnered safely! But for a breeze the heat on the 27th would have been oppressive, and from some of us engaged in open-air work the perspiration poured as freely as in the dog days. By the end of September we generally reckon it about time to give rest to the water-pail as regards everything planted in the common soil; but so fierce and trying was the sun's power, that we were obliged to water many things to keep them from flagging, as massive rows and centres of *Salvias* and *Dahlias* in the flower garden, and *Celery* and *Cauliflowers* in the kitchen garden.

KITCHEN GARDEN.

Celery.—As already noted, we have had little trouble this season with *Celery*. The rains came so opportunely, that after watering at planting we watered only once until we gave it a soaking the other day, after having trimmed and tied up each head with a small band of matting. This tying is a matter of importance when inexperienced hands are employed. They are almost sure to tie the heads too tightly, and that prevents the heart of the plant rising freely. We had to cut the strings of a lot of ours that were tied first, as they would have cut into the *Celery*, and the centre of the plant would have been cramped instead of being allowed to grow freely. The string may be put a foot or 15 inches from the ground round large *Celery*, and 8 to 12 inches around dwarf *Celery*. Such a tie is chiefly useful when the *Celery* is grown on the bed style, as there is no difficulty in the earthing up, and the tying prevents the soil going much into the heart of the plant; but, as stated above, the ties must be left loose to allow for the plant's growing. The tying also brings on blanching gradually without earthing up early. If *Celery* is worth growing at all it is worth tying neatly but somewhat loosely.

Cauliflowers coming in also required a good soaking to prevent them flagging, and so did young turned-out Cabbage plants.

Onions.—We have taken all under some spare sashes to dry well before being strung up in a wet day. In most places the crop this season has been very good.

Village Shows.—The weather has been most propitious to those that were held in the end of September. We trust the time is coming when there will not be a parish but will have at least its one horticultural show in the year. That may often be successfully grafted on a harvest-home thanksgiving, and be assimilated with, or rather substituted for, the village wake, feast, or fair. Were we asked the time most suitable for the one show of a parish to be held, we would say, From the last days in July to the second week in September. After the latter period it will generally be too late. Many of the most striking flowers in the cottage garden are gone, and many of the prime vegetables, and the show will have to depend chiefly on Apples and Pears and the root crops, and what may be left of *Dahlias*, &c. If the last fortnight of the month is wet and stormy, as it often is, the flowers, without more care than a cottager can well give, will be much battered and their freshness much gone. By the end of the month the Peas are mostly gone; nevertheless, even in the end of this month there have been some fine village shows that have reflected honour on all concerned, and owing to the fineness of the weather flowers were shown in rich variety and perfection. Still, the time is not to be depended on, and it will be wise, if other matters permit, to have all such shows at the beginning rather than at the end of the month.

From what we have heard and what has come under our own observation, the great feature at these late shows besides the flowers were Potatoes and Onions. Despite the disease, Potatoes were shown in most excellent condition, though sharp scrutiny would detect here and there a speck of the disease. Of course, every such speck when discovered would be a drawback, and that is often hard when there could be no doubt as to the general superiority of the cultivation, and when the disease is so much a matter beyond human control. Sometimes these little drawbacks are made the most of. The finest plate of Keens' Seedling Strawberry we ever saw was passed over at a show, and every one was surprised, until one of the judges turned up a Strawberry with a hole in it made by a

small slug. Now, these are fine points when nearness of excellence comes to be decided on; and no doubt some of our cottage readers would think they were rather hardly judged when very fine Potatoes of theirs were placed lower because a speck of disease had been discovered. We allude to the matter for two reasons; First, much to their honour, most of these village and parish shows owe their origin to the energy and good feeling of the clergyman of the parish, who undertakes most of the management, and the providing and collecting the prize money as a labour of love, prompted by the desire to do good to and to furnish a pleasant recreation to his parishioners. These clergymen may be expected to wield an influence that few others could possess, and in the meantime they would do much good by urging the villagers to grow more root crops, as Carrots and Parsnips, instead of nearly filling their ground with Potatoes. We have been told by many frequenters of these shows that Carrots and Parsnips were very scarce in comparison with the Potatoes. Apples and Pears were also scarce this season in many places, and the scarcity so far detracted from the show.

Another reason for mentioning this matter of *Potatoes* is, to inform the uninitiated what are the general rules for showing and judging *Potatoes*, as thus some misconceptions may be prevented, and we would wish to know what is the practice in various parts of the country, as great diversity of opinion exists as to what constitutes a kidney or a round Potato. In the general outlines there can be no mistake, it is when the one kind merges into the other that there is such variety of opinion. *Potatoes* are generally shown in three classes, Whites, Reds, and other colours, and these, again, are sub-divided into kidneys and rounds. The more like a kidney the Potato is, the more smooth its sides, and the more imperceptible the eyes the surer is the Potato to stand first in the judge's decision. There are many large fine *Potatoes* partaking of the kidney shape, but the sides are not smooth, and the eyes are deep-set, and in this case these large *Potatoes* will be passed over for a fine-shaped kidney, or by some judges will be classed among rounds. Then among the rounds a similar practice holds; and, therefore, a man who takes a dish of huge round *Potatoes*, good quality too, each one almost enough to be a supper for a working man, with some savoury addition, feels disheartened when his huge boulders, but with uneven sides and deep-sunk eyes, are passed over, and the prize given to *Potatoes* not half the size, but almost round as balls, and with no deep-set eye on one of them. The judge says truly, that such uniform-surfaced *Potatoes* lose nothing in peeling before boiling, and there is no waste in scooping out the deep-sunk eyes; but, then, the cottager if he is wise prefers boiling or roasting such large *Potatoes* in their jackets, and in that case there is not the same loss sustained by the deep-sunk eyes. We will not discuss what force there may be in this, but merely wish it to be known by all cottagers, that at present the smooth kidney and the smooth compact round Potato will carry off the honours, though much smaller than unsightly *Potatoes* with sunk eyes. We believe that as yet, Reds, Blues, and other colours have been less influenced by the disease than the Whites.

FRUIT GARDEN.

Here the work has been a repetition of that recorded in previous weeks. Gathered some of the ripest fruit, and in the case of Apples and Pears find there is a great advantage in having small bush and pyramidal trees instead of trees in the orchard form, as respects merely the force of the wind, as it exerts but little influence in throwing down the fruit when growing in bush trees. Went over Peaches, Nectarines, Vines, &c., removing almost every lateral, and shortening many shoots to help the full maturation of the wood. Plums are now becoming thin, except the Reine Claude de Bavay, Coe's Golden Drop, and the Impératrice, the value of which last we have always thought depended entirely in its late ripening. Between that and Coe's Golden Drop there could be no comparison. As already instanced, we fear that as far south as this, October Peaches will be scarce after the first and second week of October. We expect to have them later in the orchard-house than out of doors.

Brown Turkey and White Marseilles Figs have ripened to liberally well in the orchard-house, and the former has been good out of doors against a wall, but the branches allowed to hang in the bush form, a hint we obtained from Mr. Tilliard who had long practised the plan very successfully. We had previously found that Figs in an orchard-house, as well as a forcing-house, when the fruit was exposed to the sun, was

very apt to have the point burned or shrivelled, and the one half to be ripened before the other was more than half-ripened. When the fruit is more shaded, and it hangs away from the wall, we believe it ripens quite as early, and more regularly from point to point. The same plan was followed many years ago by the late William Hale, Esq., of King's Walden. He had some fine Fig trees against the walls of his stables, and he allowed no one to touch them but himself, and all they received was a little thinning now and then, and we never saw trees looking more as if left to themselves, and we never saw better fruit. It is just possible to injure many things by our extra attention and mistaken kindness.

ORNAMENTAL DEPARTMENT.

Never have lawns required more labour to keep them in good order than this season; but never have they better repaid the labour by their green carpet-like appearance. We find a few Elm leaves are falling, reminding us that the autumn is closing. All the beds, however, look too well to permit of the idea as yet of disturbing them in the least. A little picking makes all look bright and gay, greatly enhanced by the fine green of the lawn, when there is plenty of space between the beds. The dry weather, however, has forced us to water such plants as *Salvias*, just now in all their glory; and if we do not have a shower by Monday, we must also give a little water to the *Calceolarias*, that have never flinched during the season, but are in a sunny day showing a little distress. *Dahlias* will also need a good watering.

Now is a good time to visit nurseries and gardens, and note all the *Dahlias*, annuals, *Pelargoniums*, *Calceolarias*, *Verbenas*, *Lobelias*, &c., that stand the best, for a few such visits will be more useful than reading many pages of letterpress, whether from ourselves or others. Even after having noted certain kinds, unless you can obtain the plants true, or the cuttings or the seed true, you may have a disappointment after all. For instance, we wanted for a particular object a packet of the blue branching *Larkspur*, once used freely at the Crystal Palace and elsewhere, and though requesting the seedsman to be particular, we have not had a blue *Larkspur* in the lot. Most, if not all, are nicely double, and of a purple and greyish colour, and they have answered the purpose tolerably well, as we wanted them to be stand points amid a surrounding mass, or rather masses of orange *Calceolarias*. Nothing could well be more attractive from July to the present time, for owing to the dripping weather these have been masses of rich bloom, and scarcely a seed-pod forming; but though fine, they are not the colour we wanted for a particular reason to have. As another instance, we wished to quarter a large bed with *Salvia fulgens*, *Coreopsis tinctoria*, yellow, mixed with *C. Drummondii*, *Perilla*, and strong *Scarlet Pelargoniums*, but the *Coreopsis* has turned out a dark brown sort of the *atrosanguinea* section, without a trace of yellow; and but for the flowers of *C. Drummondii*, which we knew would not be high enough for the other plants, the bed, though looking well when close to it, has a dingier appearance than is desirable at a distance. Nothing could have excelled the masses of bloom, but then the colour was not what was wanted. Now, the *Coreopsis* in general, though given much to sport, yet as a whole comes pretty well as true as *Cabbages* from seed, and though, no doubt, the seedsman did his best, still the result was a disappointment.

We have not said much of annuals lately, as when we used to recommend them highly, people said we were annual-cracked; but we feel sure our humbler readers, by careful sowing and tending, might make a grand display with annuals for the outlay of a few pence or shillings, much less than they must pay for a new *Pelargonium*, which can only be kept by careful nursing over the winter, whilst the annual seeds when gathered can look after themselves in a drawer or little box in a dry place. All the *Coreopsis*es are lasting for the season, if the first seeds are nipped off, and will give less trouble than nipping off the decayed blooms of *Scarlet Pelargoniums*. This season some *Scarlet Pelargonium*-beds when first planted out had some white *Clarkias* planted among them, which were beautiful before the *Pelargoniums* crammed the beds, and even now a few sprigs scattered among them give a pleasing relief to the eye. We believe that if the grouping bedding system is to continue, we must do more to give variety, not only in colouring, but also in level; huge beds of one gorgeous colour become very fatiguing to the eye, and greatly need relief to be pleasing. We saw a flower garden belonging to a shoemaker the other day; there was a fine bed of *Scarlet Pelargoniums*, and yellow and brown *Calceolarias*, in broad bands, but even that for want of a lighter colour was fatiguing to the eye, and had not

to us the charm of a rough border, where white, and crimson, and variegated *Petunias* were blended with *Scarlet Pelargoniums*, &c. He called it a rough affair, and it was not so trim as the other fine bed, but it was really more pleasing.

We shall not expect much frost until clear nights come with the full moon; but it is well to be prepared by placing the tenderest plants in pots under cover, and having the rest so as to receive protection as wanted, as a slight frost often does great damage to plants in pots. Nearly finished with cutting-making, and gave all the air and light possible to those struck and striking. Potted *Cinerarias*, Chinese *Primulas*, and placed them safely under glass for early blooming.

Rabbits.—Will any correspondent give a list of what rabbits are fondest of when they do find their way into the flower garden? We hope to get them out, and keep them out; but we fear we shall need higher fences. We grow few *Verbenas* this season, the four-footed vermin did punish them so last season. This season they have done worse by *Lobelias*, and in some places near shrubs we have not had a blue wreath during the season; but even there the rabbits have done some good, though not intending it—they have cropped the plants so down that they will be excellent for potting. Now, as respects even *Lobelias*, we find those in beds suffer little in comparison with those used as edgings. The rabbit seems to prefer not leaving the gravel or the lawn. Of all *Verbenas*, Lord Raglan is that which they seem to care least about, and it makes a brilliant rose scarlet bed. Of all *Verbenas*, *Purple King* is their favourite. Of some beds last season we had scarcely a bloom to a plant at any time. This season we have a few good beds which they have never touched; but they have a border of *Cerastium* and white variegated *Alyssum* as well, and they have never gone over the border. Beds of Lord Raglan *Verbena*, bordered with *Purple King*, have had the *Purple King* cropped as with scissors.—R. F.

COVENT GARDEN MARKET.—OCTOBER 2.

Good descriptions of dessert fruit have been in rather more request, as Plums, Figs, Peaches, and Nectarines are nearly over. Continental produce is limited to Apples and Pears. Pines and Grapes are ample for all requirements.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	1	6	Melons..... each	1	6	to 3	0
Apricots..... doz	0	0	0	0	Nectarines..... doz.	0	0	0	0
Cherries..... lb.	0	0	0	0	Oranges..... 100	8	0	14	0
Chestnuts..... bush.	0	0	0	0	Peaches..... doz.	4	0	10	0
Currants..... ½ sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black..... doz.	0	0	0	0	Pine Apples..... lb.	4	0	0	0
Figs..... doz.	0	0	0	0	Plums..... ½ sieve	2	6	5	0
Filberts..... lb.	1	0	0	0	Quinces..... doz.	0	0	0	0
Cobs..... lb.	1	0	0	0	Raspberries..... lb.	0	9	0	0
Gooseberries .. quart	0	0	0	0	Strawberries..... lb.	0	0	0	0
Grapes, Hothouse.. lb.	1	6	4	0	Walnuts..... bush.	10	0	20	0
Lemons..... 100	8	0	12	0	do. per 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes..... esch	0	3	to 0	6	Leeks..... bunch	0	3	to 0	6
Asparagus bundle	0	0	0	0	Lettuce.... per acre	1	0	1	6
Beans, Kidney, ½ sieve	2	0	3	6	Mushrooms.... pottle	2	0	3	0
Scarlet Run, ½ sieve	2	0	3	0	Must.& Cress, punnet	0	2	0	0
Beet, Red..... doz.	2	0	3	0	Onions..... per doz. bchs.	5	0	0	0
Broccoli..... bundle	0	6	1	6	Parsley..... per sieve	3	0	0	0
Brus. Sprouts ½ sieve	2	0	2	6	Parsnips..... doz.	0	9	1	0
Cabbage..... doz.	1	0	1	6	Peas..... per quart	0	0	0	0
Capsicums..... 100	2	0	3	0	Potatoes..... bushel	2	0	3	6
Carrots..... bunch	0	6	0	8	Kidney..... do.	3	0	4	0
Canliflower..... doz.	2	0	4	0	Radishes doz. bunches	0	9	1	0
Celery..... bundle	1	0	2	0	Rhubarb..... bundlo	0	0	0	0
Cucumbers..... each	0	4	0	8	Savoy..... doz.	0	0	0	9
pickling..... doz.	2	0	0	0	Sea-kele..... basket	0	0	0	0
Endive..... doz.	1	0	0	0	Shallots..... lb.	0	8	0	9
Fennel..... bunch	0	3	0	0	Spinach..... busnel	2	0	3	0
Garlic..... lb.	0	8	1	0	Tomatoes.... per doz.	2	0	3	0
Herbs..... bunch	0	3	0	0	Turnips..... bunch	0	6	0	0
Horseradish .. bundle	2	6	4	0	Vegetable Marrows,dz.	1	0	2	0

TRADE CATALOGUES RECEIVED.

W. Barron & Son, Elvaston Nurseries, Borrowash, near Derby.—*Select Catalogue of Ornamental Plants.*

Paul & Son, Old Nurseries, Cheshunt, Herts.—*Rose Catalogue*, 1867-68.

TO CORRESPONDENTS.

HYACINTHS IN POTS (Colonel J.).—We cannot correct our contemporaries' mistakes or deficiencies. The article must have been written for nurserymen. Both Hyacinths and Tulips in pots must be under glass, and never taken out of the pots until done blooming. If you need any other information write again.

TREES BROKEN BY WIND (*Subscribers*).—We are persuaded that the trees would be better without the stakes, unless you place them so that the strain will not be on one part only. To the power of the wind on the head above the stake or fastening, we think is due the breaking off of the head of the Variegated Plane, or Sycamore. After trees are planted there is no necessity to tie them to stakes, except to keep them erect and steady until the roots have obtained a sufficient hold of the soil. The

breakage is due to the tying. You will do well to remove the stakes. The Weeping Ash will not break. We would cut-in the side-branches of the tree which have had their heads broken off, and in spring select one of the strongest shoots, putting a stake to the stem, and to this train the shoot you propose for a leader.

LILIAM ACRATUM CULTURE (*A Constant Subscriber*).—The culture of this plant is the same as that of *Lilium lancifolium*. Early next month you may report it, removing all the soil that comes away easily, but on no account remove or injure the fresh healthy roots. If there are any offsets remove them, and pot them off singly in 4½-inch pots, or three or more may be placed in a seven-inch pot. The drainage should be good. Half-fill the pot with a compost of one half turfy loam from rotted turves, and the remaining half equal parts of sandy peat and leaf mould, or very old manure. Introduce the bulbs, spreading out the roots, and cover them and the bulbs to a little more than an inch above the crown. The old decayed stem should be cut down to the soil. One bulb should have a seven-inch pot, whilst three bulbs may be placed in a nine-inch, or seven or more may be placed in a 12 or 13-inch pot. Strong bulbs should have more pot-room than weak. Give a good watering, and place the pots in a house or pit from which frost is just excluded. The soil should not be kept more than moist over the winter. When the shoots are growing water should be given, and a light and airy situation in a cool house or pit should be afforded. The pot should be filled to the rim with the same kind of soil as was used for potting, the watering should be liberal, and liquid manure may be given once a week. The frequent syringing overhead will also be of advantage. You cannot give the plants too much air, nor keep them too near the glass, only in no case must they be allowed to touch it. After flowering lessen the supply of water, and report immediately the foliage turns yellow.

BULB (*Idem*).—Your enormous bulb from the Cape is probably one of the *Brunsvigias*, and from your description, *B. Josephina*, which cannot have too much water in summer, nor be kept too dry in winter, and should at all times be kept near the glass. It should be kept in pots, small for the size of the bulbs, and never repotted until the bulbs split the pots, or the soil in these has become sodden. It succeeds in a greenhouse.

CRINUM CULTURE (*Idem*).—If you were to give your plant an increase of temperature in spring, and keep it well supplied with water, and in a moist atmosphere, it would, in all probability, grow very strongly; and by exposing the plant fully to light and air after a good growth has been made, lessening the supply of water, but not so as to cause the leaves to flag, it would, most probably, attain strength for flowering, which is the main requisite, combined with the well-ripening, or perfecting the growth made. During its season of rest you can hardly keep the plant too near the glass, or give it too little water, always bearing in mind that it does not lose its foliage, and must not be dried to that extent. We apprehend your plants are the *Crinum* cypripedium, which has white sweet-scented flowers. It is ordinarily a greenhouse plant, but it requires a warm one to grow it well. It is nearly hardy.

LILIAM ACRATUM AND L. GIGANTEUM CULTURE (*A Constant Reader*).—See what is said in answer to another correspondent about *Lilium acratum*. *L. giganteum* you will now report in a compost of rich turfy loam one-half, sandy peat one-fourth, and one-fourth leaf mould or very rotten manure, adding sand if the soil is deficient in that substance. Keep it rather dry over the winter, but when it begins to grow it should have an abundant supply of water, and, in fact, place the pot in a saucer of water, during the summer, towards the close of which the plant should be fully exposed to light and air, and the supply of water be gradually reduced, and left off altogether by September, so as to insure a state of rest and the perfection of the growth. During the winter safety from frost is essential, and a light and airy situation indispensable. The plant may, if it requires it, be potted into a larger pot in February, or early in March, that being its last shift prior to flowering. All offsets should be removed and potted before they become large.

VALLOTA PURPUREA AFTER FLOWERING (*W. B. R.*).—You should keep the plant rather dry at the root during the winter, in fact, give it no water so long as its foliage remains fresh, which it will do in a room window for weeks. When it is growing freely, water should be given copiously, and the pot may be set in a saucer of water. When it has ceased growing lessen the supply of water, and keep the soil no more than moist whilst the plant is not in active growth. Do not report it, nor at any time give it a large pot, as it will flower much better when the roots are confined than when they are allowed much soil. A compost of two-thirds rather strong loam from rotten turves, and one-third leaf mould, with a free admixture of sand, will grow it well, good drainage being provided. It is increased by offsets, which are produced around the old plant rather plentifully.

LOMARIA GIBBA SEEDLING (*J. Bush*).—*Lomaria gibba*, so far as we know, is not more subject to variation from spores than other kinds of *Lomaria* and *Blechnum*. We have not had any instance of the variation named, but we have seen it frequently in other species, and we think that a hybrid has been produced between the *Lomaria* and *Blechnum* in your case, but you will best judge of this yourself by a comparison of the plants of both species with the seedling.

VARIOUS (*A. L. C.*).—The best and most simple kind of house for Cucumbers in winter, is a low half-span, with a bed in front, having hot-water pipes under, and a pathway at back with two hot-water pipes there and two in front. The best two white bedding plants are *Pelargonium Alba floribunda* nana, and *Pelargonium Purity*. *Lobelia Snowflake* is also good. The best of plants for covering ground between shrubs is *Vinca minor* and *V. major*. The best covering for a slope is common Laurel with the shoots pegged down.—G. A.

SEEDLING PEACH TREE (*Hounslow Heath*).—Your tree being in the open ground, we would remove it immediately the leaves fall and plant against a south wall, or in a pot in an orchard-house, if you have one. You would do well to thin the shoots after the leaves fall, shortening the shoots if necessary to secure a well-shaped head.

ALOYSIA CITRIODORA LEAVES EATEN (*South Croydon*).—The leaves sent us are eaten by some caterpillar, which you may possibly yet find upon a close examination of the plants after dark, the plant being held over a white sheet and shaken. Hand-picking is the only remedy.

PRUNING VINES (*J. H. D.*).—Your Vines planted two years ago may, after the leaves have fallen, be cut back to within 3 feet of the bottom of the rafters, and you may take half a dozen bunches of Grapes next year. "The Vine Manual" will suit you. You may have it free by post from our office for thirty-two postage stamps.

AZALEA LEAVES BROWNED (*Idem*).—The leaves were browned, we think, by syringing overhead, and keeping them wet and the sun shining upon them in this state has scorched them. You say you do not water the plants overhead, but only on the surface of the pot. The appearance of the leaves, however, does not accord with your statement, and we can only account for the browning otherwise by water standing on them, or from its being withheld from the roots so as to cause the leaves to flag.

HARDY FLOWERING SHRUBS (*A Cheshire Subscriber*).—*Evergreen*: *Laurustinus*, *Berberis Darwinii*, *B. Wallichiana*, and *B. aquifolium*, *Cistus angustifolius*, *Chamaelasma foliosum*, *Daphne eucorum*, and *Raphiolepis ovata*. *Deciduous*: *Amygdalus persica*, double-flowering variety; *Chimonanthus fragrans*, *Cydonia japonica*, *Cytisus alpinus*, *Daphne mezereum* in variety, *Deutzia gracilis*, *Hibiscus syriacus*, *Hydrangea japonica*, *Paeonia Montan* varieties, *Philadelphus coronarius*, *Prunus triloba* flore-pleno, *Ribes sanguineum* and its varieties *album* and *atro-rubrum*, *Spiraea arifolia*, *callosa*, *prunifolia* flore-pleno, *salicifolia* paniculata *alba*; *Syringa persica* and *persica alba*, *S. vulgaris* Charles X. and Dr. Lindley, and *Weigela rosea*.

SCALE ON A PEAR TREE (*A Constant Reader*).—The leaves and shoot sent us were infested with the brown scale, and not the mealy bug. Your remedy will be, after the leaves have fallen, to give the tree a few good syringings with water at a temperature of 140°. The leaves should be cleared away as they fall and burned. After the leaves are all off wash or paint every branch and shoot with a composition formed of 1 lb. of ground tobacco, having a gallon of boiling water poured over it, and 8 ozs. of soft soap added and dissolved. This applied with a brush, working it well into every hole and crevice, will destroy the pest. The brushing is the most important part of the operation as regards freeing the tree of the insect, but it should be done with care, so as not to displace or rub off the buds. Exposing the trees by the removal of the lights during frost, so that the branches may be frozen, will also do much to destroy the scale. The dressing with the composition should be repeated, if necessary, a little before the swelling of the buds.

GAS-HEATING (*W. Langmead*).—There are many forms of heating by gas which will effectually exclude frost. In our tenth volume, *New Series*, we have published all the forms with illustrations.

CRYSTAL PALACE (*J. S.*).—We do not think there will be another horticultural exhibition there this autumn.

FLOWER-GARDEN PLAN (*D. F.*).—We have a volume with numerous plans now printing.

PIGMY GRAPES (*H. M. S.*).—We cannot obtain any more information, and in our last week's *Journal* Mr. Henderson declines answering more queries. We must wait until he publishes his promised book.

NAME OF FRUIT (*W. B. S.*).—Appears to be some seedling Apple not known.

NAMES OF PLANTS (*P. F. L. S.*).—*Iresine Herbstii*. (*T. W.*).—1, *Chelone glabra*; 2, *Sanguisorba media*. (*E. J. G.*).—*Pyrus scandica*. (*G. C.*).—1, *Saxifrage* of the cristata group; 2, *Cuphea platycentra*; 3, *Oxalis*; 4, *Epilobium montanum*; 5, *Alonsoa*. (*A. G. M.*).—*Pteris* (*Litobrochia*) *incisa*. (*T. T. M.*).—1, *Datura stramonium*; 2, *Erica ramentacea*; 3, *Myosotis caespitosa*; 4, *Campanula*, sp. (*Byford*).—*Littorella laevis*. (*Veritas*).—1, *Veronica incana*; 2, *Erica ramentacea*. (*N. & Wood*).—*Tropaeolum tuberosum*. (*A Young Gardener*).—(Bad specimens) 2, *Helianthemum stramineum*; 4, *Blechnum occidentale*; 6, *Phymatodes vulgaris*; 7, *Eschynanthus*. (*P. J. N.*).—*Echium vulgare*. (*A Constant Reader*).—1, *Daphne laureola*; 2, 3, and 4, species of *Pinus* not determinable without cones; 5, *Scopolendrium vulgare*. (*A Subscriber, Sandown*).—Probably *Athyrium Filix-femina* (no fructification).

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending October 1st.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 25	30.434	30.381	68	32	58	57	E.	.00	Partially overcast; fine; clear at night.
Thurs. 26	30.410	30.381	68	33	57	57	S.E.	.00	Foggy, hoar frost early a.m.; very fine; overcast.
Fri. . 27	30.298	30.241	64	44	57	56	S.W.	.00	Slightly overcast; clear and very fine; fine.
Sat. . 28	30.298	30.167	66	47	58	56	S.W.	.00	Fine; cloudy; clear and fine at night.
Sun. . 29	30.162	30.181	+3	46	57	57	S.W.	.00	Overcast; cloudy; clear and fine.
Mon. . 30	30.080	29.895	67	36	57	57	S.W.	.00	Clear; cloudy and windy; fine at night.
Tues. . 1	30.354	30.290	60	32	56	56	N.	.00	Clear and fine throughout.
Mean	30.296	30.214	64.43	38.57	57.14	56.57	..	0.00	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

HENS OBSTINATELY BROODY—EXTENSIVE
POULTRY-KEEPING.

WHAT is best to do under the following circumstances? I have three hens that will insist upon sitting now. We have ducked them two and three times a-day, but to no purpose, they are determined to sit, and do nothing else. What other means can I adopt? Or will it be wise to let them have eggs to sit on?

With reference to poultry-keeping for profit in this country and in France, one main difference consists in the food given. In France poultry-keepers buy large quantities of horse flesh as food, which is cheaper and more easily to be had there than in England. Here, after many experiments, I find that sharps, grains, and Indian corn, alternately, form the best and cheapest food I can get for my poultry. Again, in France, poultry-feeders often keep as many as ten thousand fowls; that would scarcely be practicable in England.

What food, and in what quantities would you advise for economy, and at the same time nourishment?—E. F. T.

[Ducking and such-like expedients are cruelties. If you do not object to winter chickens let each hen have half a dozen eggs. If you do object, it is enough to take every opportunity of driving them from the spot they have chosen for their nest, and if it is in a house shut them out.

It is a mistake to suppose that establishments of ten thousand hens are common in France, or that horse flesh is commonly used. The largest establishment in Europe, was that of the Prince of Tour and Taxis. Maggots were there the principal food. There is no difficulty in keeping ten thousand hens if you have space enough, but it would be as reasonable to try to manoeuvre ten thousand troops in Grosvenor Square as to keep a similar number of hens on a small run. They must have space, especially when they have chickens. Poultry can only be kept on a large scale where land is of small value. The food that costs least money is not always the cheapest, it affords least nourishment. Where poultry is to be kept cheaply, and on a large scale, all the food must be given ground, on the same principle as that adopted by the Sussex men, who are the most successful breeders, rearers, and feeders in England or Europe. They buy the best oats, and grind the whole; nothing whatever is taken from it, and yet it is ground so fine it mixes like flour. Nothing is so profitable as this. We are not very friendly to sharps or grains. We like good barley; and where people have time, opportunity, and the desire to master the subject, we advise them to feed by weight, and they will soon find the dearest and best food is the cheapest.]

PURPOSELY INJURING EXHIBITED POULTRY.

PERMIT us through the medium of your Journal to make a complaint which we think is not uncalled for. At the Middleton Show we were successful exhibitors in the Silver-pencilled Hamburg classes, and our birds were returned home in due time; but we were much grieved to find that the cockerel shown with the pair of pullets had three feathers plucked out of his tail, two hangers and one sickle. Now, if we could have persuaded ourselves that this had been accidentally done, we would not have said a word about it; but we cannot so consider, for the hangers were plucked from one side of his tail, and the sickle feather from the opposite side.

We are not the first who have suffered from such practices, and to say the least to inflict such an injury is mean in the extreme. We would suggest that the managers of the various shows which are yet to come off, should keep a sharp look-out and see if the criminal cannot be detected, and if there is not a law that can be brought to bear upon him.—W. & J. BAIRSTOW, Fearncliffe, Bingley, Yorkshire.

USE OF A WARNING.

ACTING upon the advice contained in your note to Mr. John Stuart's letter, published in the Journal of August 29th, to require a post-office order payable ten days after date previously to parting with some Pigeons and poultry I had for sale, and the would-be purchaser declining to comply with such a reason-

able request, I naturally felt suspicious, and at some trouble and expense made inquiries respecting him, the result of which I beg to communicate to you for the benefit of others.

"H. Eastwood, &c., Salesman. A weekly tenant, shop been opened about a week, not known in the neighbourhood; house and shop very dirty, contents of the latter a little milk."

I need scarcely add I kept my Pigeons and poultry.—Geo. WARE.

WISBECH POULTRY SHOW.

THE glorious autumn sun which slowly dispersed the morning mists of Friday the 27th inst., and shone with such genial splendour all the day, gave the last necessary element of success to the fourth annual Show of the Cambridgeshire and Isle of Ely Agricultural Society held at Wisbech that day, and made a visit to the Show as pleasant and enjoyable as the sight was meritorious. It is long since anything in the shape of an agricultural show was held at Wisbech, the defunct local society being almost forgotten. Still, it is scarcely necessary to say the interests and connection of the town are essentially agricultural; and when it was known that the Show was to be held at Wisbech the town and neighbourhood took up the matter with great spirit. Not only have about eighty of the leading agriculturists of the district joined the Society as members of the local committee, or otherwise, and by that means largely augmented the income of the Society, but a very liberal subscription was raised in the town towards the prize list; in fact Wisbech may be said to have contributed about one-fourth of the value of the prizes, which in the aggregate amount to about £600. In raising this local list much praise is due to W. Groom, Esq., the Mayor, for his energetic assiduity in the matter. To the town is also almost entirely due the Poultry Show, which has been so prominent and attractive a feature, and has been witnessed with pleasure and admiration by such a large number of persons.

DORKINGS (Coloured).—First, H. Lingwood, Barking. Second, G. Clarke, Long Sutton.

DORKINGS (Any variety except Coloured).—Prize, H. Lingwood. *Chickens*.—First, Dr. Campbell, Brentwood. Second, Hon. H. W. Fitzwilliam, Rotherham.

GAME (Black-breasted or other Reds).—First, S. Matthew, Stowmarket. Second, J. Jeken, Eltham, Kent.

GAME (Any other variety).—First, S. Matthew. Second, G. Lee, Loog Sutton.

COCHIN-CHINA (Buff).—First, T. C. Marshall, Peterborough. Second, H. Lingwood.

COCHIN-CHINA (Any other variety).—First, H. Lingwood. Second, T. Doty.

GAME BANTAMS (Any variety).—First, W. F. Entwistle, Leeds. Second, R. Pashley, Worksop.

BANTAMS (Sobright's Golden or Silver).—First, S. & R. Ashton, Mottram, Cheshire. Second, J. W. Harrison, Spalding.

BANTAMS (Any other variety).—First, A. Storrar. Second, Miss L. N. Beasley, Northampton.

HAMDBRONS (Golden or Silver-spangled).—First, S. & R. Ashton, Second, Rev. F. Tearn, Newmarket.

HAMDBRONS (Golden or Silver-pencilled).—First and Second, C. Havers, Essex.

SPANISH.—First, F. James, Peckham. Second, C. Bamford, Cambridge.

BRAHMA POOTRA (Dark).—First, J. W. Harrison. Second, A. H. Verity, Cheshire.

BRAHMA POOTRA (Light).—First and Second, H. Dowsett, Pleshey, near Chelmsford.

ANY VARIETY.—First, Hon. W. Fitzwilliam. Second, G. Clarke.

TURKEYS (Any variety).—First, E. Harris. Second, J. N. Beasley, Brampton.

GUINEA FOWLS (Any variety).—First, C. Bamford. Second, G. Clarke.

DUCKS (Rouen).—First, H. Dowsett. Second, J. W. Harrison.

DUCKS (Aylesbury).—First, H. E. Emberlin, Oadby. Second, Rev. H. Crosse, Cambridge.

DUCKS (Any other variety).—First, C. Bamford, Cambridge. Second, S. and R. Ashton, Mottram.

GESE (Any variety).—First, Erackenbury, Downham. Second, C. Bamford. *Goslings*.—Prize, Capt. Aveling, Elm.

SELLING CLASS.—First, J. W. Harrison, Spalding. Second, G. Clarke, Long Sutton.

PIGEONS.

CARRIERS.—First, B. Fulton, Deptford. Second, E. E. M. Boyds, Rochdale.

TUMBLERS.—First and Second, R. Fulton.

OWLS.—First, R. Fulton. Second, J. Fielding, jun., Rochdale.

POUTERS.—First, R. Fulton. Second, W. R. Rose, Kettering.

BARNS.—First, E. E. M. Boyds. Second, Maclure & Redford.

FANTAILS.—First, H. M. Maynard, Ryde. Second, H. Yardley, Birmingham.

JACOBINS.—First, L. Glassey, Rochdale. Second, J. Thompson, Bingley.

TRIBITS.—First, J. Thompson. Second, H. Yardley.

ANY VARIETY.—First, J. Thompson. Second, H. Yardley.

SELLING CLASS.—First, J. R. Jessop, Hull. Second, A. H. Stewart, Harborne.

RABBIT.—*Pure-Bred*.—First, Wagstaff & Hanson, Thorne. Second, R. Wise. *Heaviest*.—First, G. Clark, Long Sutton. Second, Wagstaff and Hanson.—(*Wisbech Chronicle*.)

ABNORMAL EGGS.—A friend of mine possesses a Dorking hen that a few weeks ago laid an egg measuring 10½ inches by 7½; inside it was another large-sized egg, with a well-developed shell, which weighed 9 ozs. The same hen a few weeks before

practised eye, as surely reveal the health of the tree, and will in some, if not in most instances, point to the cause of the disease.

This spring one of my Pear trees, apparently in vigorous health, had a considerable number of its leaves affected with a sort of blister or fungus. *THE JOURNAL OF HORTICULTURE*, like a skilful physician, recommended the application of repeated doses of sulphur. This remedy was to a certain extent successful. I have seen large Pear trees with every leaf and fruit horribly disfigured year after year by this disease. This leads me to suppose that doses of sulphur act only as a palliative, and that a more radical remedy must be tried. I fancy the tree has been sucking up some unwholesome juices which have disagreed with it, and so spoilt its complexion. It must be carefully forked out of the ground about the 21st of this month, have its roots examined and somewhat shortened, and much of the old soil removed; and it will be planted again in a mixture of fresh earth roasted and unroasted, and some old hotbed manure. I shall be much disappointed if this treatment do not effect a complete cure.

I have another Pear tree which, though all right last year, has now a small crop of distorted fruit with hard knots in the skin, which is also stained with dark blotches. As this is the best the tree can do this year, a cure for this disease must be found. The tree is in a state of semi-starvation. Some of its roots have penetrated into the subsoil—pure gravel—and find there nothing digestible; the rest have probably exhausted much of the food within their reach. This tree must also be forked out of the ground, root-pruned, all tap roots cut off, and planted again in fresh and enriched soil. It is seventeen years old, and has had a similar illness once before, so I know both the cause of it, and the proper treatment.

I cannot conclude this essay better than by quoting from Dixon's "America" the very suggestive words of the Elder Frederick of the Shaker Union. Speaking of fruit trees, he says, "A tree has its wants and wishes, and a man should study them as a teacher watches a child, to see what he can do. If you love the plant, and take heed of what it likes, you will be well repaid by it. I don't know whether a tree ever comes to know you, I think it may; but I am sure it feels when you care for it and tend it, as a child does, as a woman does."—C. J. M.

WHAT QUALITIES SHOULD A BEDDING PELARGONIUM POSSESS?

At the Pelargonium Show held on the 17th of September, there were to be seen Variegated Pelargoniums of almost every conceivable shade of variegation. There were also numerous varieties comparatively worthless as bedding plants. Many of them are certainly very beautiful to look at, but the question that first is suggested to the mind of the experienced, or those who from long practice are qualified to give an outline of the desirable qualities a good and useful bedding Pelargonium should possess, is, Will they stand the inclemency of the weather and exposure to our constantly varying climate? Many of them are like butterflies that bask in the bright sunshine, but disappear in the cold and wet weather. To this class belong varieties such as Miss Watson and Northern Star. The latter is a variety of my own raising, and is most beautiful as a pot plant when nursed in pits or frames, giving it the benefit of full exposure to the open air in favourable weather, when there is not a succession of wet days or bright sunshine, or keeping it shaded from the direct rays of the sun, and fully exposing it in the open air as soon as the sun has ceased bestowing its vertical rays upon the plant. The reason of this is, that there is not sufficient green in the leaf to enable it to bear the light. Miss Watson and Northern Star are types of many other varieties that stood high in the estimation of the judges who were selected to perform a duty requiring no small amount of discernment and knowledge of the qualities mentioned at the commencement of this paper. That they did their duty conscientiously there can be no doubt.

Messrs. Smith showed Jetty Lacy, a fine variety, and likely to stand well in the open air; but Sunray and Sylph are only fit for growing in pots under the conditions named above. Mrs. Dunnett and Lady Sheffield, shown in the same class, are also too delicate to be useful for bedding purposes. According to my judgment the only varieties exhibited in Classes 5 and 8 were Countess of Craven (this appears to have a good constitution), Jetty Lacy, Mrs. Dix, Beauty of Culford, and Queen Victoria (Perkins).

I now come to what to me was the most interesting part of the Exhibition—namely, the Bronze and Gold Zonal Pelargoniums, not because I was a successful exhibitor of them, but because they are, at last, deemed worthy to form an attractive feature of an exhibition; and it is the class on which I feel most qualified to give an opinion, having originated this strain of Bronze and Gold, of which Beauty of Oulton is the type. In Class 6 for the best Gold and Bronze variety, what I should have considered the best for bedding purposes, had the plant belonged to any one else—namely, Empress Eugénie, was passed by, because the leaves were not perfectly flat, and the outline of the leaf round. The premier prize was given to a plant having nothing to recommend it but its flat leaf, and which will be perfectly useless as a bedding plant for the reason given above—namely, want of constitution, and not having sufficient chlorophyll in the leaf to enable it to bear the light. The plant was shown in a seedling state, and will be very different when seen again next spring after it has been propagated. The round, smooth leaf in the Pelargonium is indicative of a want of constitution, but leaves like those produced by Empress Eugénie will stand any amount of both sunshine and rain, without the slightest defect. They are also very effective at a long distance off. After another season when Beauty of Calderdale, Empress Eugénie, Her Majesty, Beauty of Ribblesdale, Perilla, &c., become more generally grown, they will be the recognised type of what constitutes a good bedding Pelargonium.

The varieties such as Egyptian Queen, Cleopatra, and Mrs. Frampton are descendants from Luna. It is well known that two or three hot days will completely spoil the appearance of Luna, giving it that rusty appearance which mars its beauty completely, and makes it useless as a bedding plant. Mrs. Frampton I did not consider so good as well grown. I have some hundreds quite equal to any of the above three varieties, and many of them superior, that I shall not again propagate, because I feel sure they will never make bedding plants by reason of their delicate constitution. Countess of Kellie appeared to possess a freer and more robust habit of growth, and as the examples shown were well-established propagated plants, there is every reason to think it will prove a good bedding plant.

The three varieties, Sybil, Brilliant, and Combatant, shown in Class 4, will never make any way as bedding plants. Sybil has very small crumpled leaves, and has no character to recommend it as a bedding plant. It is very much inferior to Model. Brilliant is not so good as Luna, and Combatant is so much like Brilliant, that very little difference could be seen in them. If the stock of each were propagated and mixed, I think it would be impossible to tell one from the other, unless the plants were in flower, and there was a difference in the colour of the flower. The only property they had to recommend them was, they were nicely coloured, and this I considered artificial, being caused by starvation. The plants appeared to have been kept in the same pots all through the season; there was not a leaf on them much larger than a half-crown piece.

I was much pleased to see the Bronze and Gold Pelargoniums so well represented on the 17th, and considered the Exhibition, on the whole, very satisfactory. I shall have very great pleasure in entering the lists again with the three principal exhibitors of Bronze and Gold Pelargoniums—namely, Messrs. Carter & Co., Messrs. Downie, Laird, & Laing, and Messrs. F. and A. Smith, and propose a sweepstakes to come off at the Manchester National Show, to be held next Whitsuntide, each exhibitor to show three plants of each kind, and to put down a sum of £10 10s., six, four, or three distinct kinds being exhibited, and the owner of the best collection winning the £42. The judges to be appointed by mutual arrangement, two judges of known ability to be chosen, and their expenses to be paid by the losing parties in equal proportions. I hope the gentlemen I have named will at once respond.—J. WILLS.

CUCUMBER PRODUCED BY A MALE FLOWER.

A FRIEND of mine, Mr. Aymas Hunt, residing at Denby, has a small house which he uses for Cucumber-growing; in it he has a plant of a variety called Snowdon, and there is on it a fruit produced from a male blossom.

The blossom at first appeared the same as any one of the other male blossoms on the plant, and afterwards a fruit commenced growing through the flower, and has continued so growing up to the present time. I saw it a day or two ago, and

it was then 3 inches long and $3\frac{1}{4}$ inches round. As it has grown the bloom has got half way up the fruit, and the half nearest the base is covered with white spines, while the end nearest the point is perfectly smooth. I may add that it has been growing for more than two months. The plant is quite healthy, and has been so all the time, and at the present time there are five good fruits on it besides this curiosity.

If any of your correspondents have met with anything similar to this I should be glad to hear of it, or if they can give any reason for it. Mr. Hunt would readily answer inquiries any one may wish to make respecting it.—H. PERKINS, *Denby Gardens, Derbyshire*.

ORCHARD-HOUSE CULTURE.

SOME weeks, or perhaps months ago, one of your correspondents, in writing on the above subject, said that he had great success from deviating every season more and more from the directions given by Mr. Rivers in his book. Since then I have hinted in your columns, that I hoped he would favour your readers with a detailed account of his method of managing orchard-house trees. Allow me kindly to remind him, that as he mentioned my name it is a duty which he owes to me, as well as to your numerous readers, to give a full explanation.

The system followed here is so perfect, judging by its results, as to lead me to think it cannot be improved; yet I well know that in gardening it is never too late to learn.

My Peach and Nectarine trees, in an orchard-house 100 feet by 24, are in the most perfect state, not only those in pots, but some fine standards growing in the hard unstirred borders. They have not been syringed since the last week in July, yet every leaf is green and glossy with health, and they have borne fruit as fine or finer than in any previous season. Not a trace of red spider or mildew is to be seen. The house has no roof ventilation, but merely a triangular aperture, always open, at each end, under the gables. The ventilating shutters on each side are near the ground, and 20 inches deep. This is not by any means a complicated structure, yet it has never failed for seven consecutive years in giving a healthy growth to the trees and abundance of Peaches, Nectarines, and Apricots.

The management of the trees has been simple enough. They have had no water from November till March; they have been syringed regularly in early summer; have had a portion of the compost taken from the pots in October, and replaced with fresh; and have had surface-dressings of my usual rich mixture three times during the summer. The pots stand on a hard floor, and the roots come up to feed on the surface-dressing, not attempting to make their way through the bottoms of the pots, seeming instinctively to know where their food is. This method I well know differs from that recommended in the early days of orchard-house culture, but I have made it known in later editions of the "Orchard-House," and in your columns.

Since writing the above I have been much interested in reading my friend Pearson's short article. The "mistake" he so amusingly alludes to has been annually made here for seventeen consecutive years with Peach and Nectarine trees in pots, and, as I have said above, the top-dressing afforded the trees in October has given them health and fertility during the whole of that time. In an article headed "Apricot Culture" I have stated, that observing some trees which had not been top-dressed in autumn bearing more abundantly than those that had been, I took advantage of the hint, and, with some exceptions, I do not top-dress my Apricots in autumn, but wait till the fruit is well set, and then merely scrape off the exhausted surface-mould, and give the trees abundance of a rich surface-dressing; this has answered admirably. The exceptions to this mode of treatment are some fine old Apricot bushes, which were top-dressed last autumn in the usual way. Two or three of these dropped their blossoms, and gave but slight crops of fruit; but the remainder, some eight or ten in number, produced most beautiful crops of the finest fruit I ever saw. This fact did not, however, alter my conviction that the best method of growing Apricots in pots under glass is that I have given in the article above referred to, because it is more simple.

Observing the success of my new mode of Apricot culture, I have more than once this summer thought of applying it to my Peach and Nectarine trees, more particularly those in 15 and 18-inch pots, as they give a large surface for summer surface-dressings; but my trees in deep 12-inch pots have

thrown up such masses of fibrous roots into the surface-dressing, that till they are removed there is no room for fresh compost, and pieces of slate must be stuck in round the edge of the pot to support this summer surface-dressing. This method we practise here when a tree has a large crop, so that the confined area of surface will not allow of sufficient food being given to it; for, after all, fruit-growing is a question of food and water, without which neither animal nor tree life can flourish. I have, therefore, come to the conclusion, that Peach and Nectarine as well as Apricot trees in large pots, need not be top-dressed—i. e., have fresh compost in October, but that the soil may remain hard and dry all winter. It will be seen by those who read the commencement of this article, that the "mistake" of top-dressing in October has given me fine healthy trees and fine crops of fruit; yet I am quite inclined to give it up with trees in large pots, as it will save trouble and tend to simplify orchard-house culture.

Moreover, I am inclined to think that pots with a large area of surface should be employed in preference to deep pots, so that an 18-inch pot should not, as at present, be 18 inches deep, but rather 12 inches or so deep, and 24 inches over at top, so as to hold a goodly quantity of summer surface food. At any rate, the experiment can be so easily carried out as to be quite worthy of notice. The misfortune is that we may be deceived, and that trees that have flourished for some years under the present system of renewing the soil in October may not like the "mistake" to be rectified, and in revenge pay court to our enemies red spider and mildew. I repeat, however, that this simple mode of culture, which has done so much for Apricots, is quite worth extending to the culture of Peach, Nectarine, and other orchard-house trees.

This season has been favourable to the ripening of Peaches under glass; they have ripened slowly and well. There is, however, a mystery in the ripening of Peaches and Nectarines in orchard-houses which I have never been able to solve. It is this: in some seasons Nectarines are in the ascendant, and are richer in flavour than Peaches, and then a change comes, and Peaches are richer than Nectarines; yet the trees are the same, and stand in the same positions, in the same house, and under the same treatment. These curious variations in flavour have occurred here for many years, so that we have often designated one season as a "Nectarine year," and another as a "Peach year." They do not occur with alternating regularity, but they happen occasionally. These changes in the flavour of fruits are, doubtless, owing to atmospheric causes not perceptible to our feelings. How sensitive is the organisation of the vegetable kingdom! This season of 1867 has been here a Peach year *par excellence*. The fruit of many kinds of Nectarines shrivelled and dropped off when on the point of ripening, and if I had not known well the Pine Apple and Victoria Nectarines I should have rushed into an opinion that they were new and worthless kinds, as their fruit, so fine with my friends, was here covered with russet and poor in flavour, although the trees are in grand health. Several other kinds of Nectarines also failed in flavour and goodness.

With respect to Peaches, the season has been most favourable to the *Grosse Mignonne* and the *Early Grosse Mignonne*. They ripened more slowly than usual, and were piquant—a flavour they often lack, and delicious. The *Noblesse Peaches* were not so racy as usual, and the *English Galande* (*Violette Hâtive*), a fine tree, fifteen years old, gave a good crop of fruit, which ripened a fortnight later than usual, and were very inferior in flavour. It was the same with the *French Galande*, a near relation; the fruit produced were very inferior to those usually borne by the same tree. These trees are growing in the same house, and stand in the same positions they have occupied for years. How subtle, then, must the atmospheric change be to bring such results! The *Early Albert Peach*, the seedling tree, gave a fine crop of large beautiful fruit, but they were not rich as usual, but dull in flavour. The *Early York Peaches* were not so rich as usual, but the glandular varieties raised from seed gave fruit which my old friend, M. P. Wilder, of Boston, U.S., declared to be the finest Peach he ever tasted. As a late Peach, the *Princess of Wales* was most beautiful with its cream-coloured skin and pink cheek, and was rich and delicious, while the *Early Silver Peach*, so delicate and racy in a warm season, was too acid.

In noticing these matters, I wish to guard orchard-house cultivators against rushing into an opinion about the quality of any particular fruit. I have occasionally gathered a fine fruit from some old good kind, such as *Grosse Mignonne*, and have thrown it away instead of eating it. Why? It had re-

mained on the tree forty-eight hours too long. Let us all ponder on these things, and not form a new opinion without close observation and reflection.

Writing the word "observation" reminded me that I ought at once to look at my trees, to observe the exact state of their surface roots. I find my old Apricot trees in pots, that have not been top-dressed in autumn for two years, have, as it seems, eaten up the two or three surface-dressings given to them in summer; have made short shoots, full of blossom-buds; but have not made masses of fibrous roots above the surface. My old Peach trees in 18-inch pots, that have had their regular autumn top-dressings of rich loam and manure for many years, are in the most vigorous health, and have required frequent summer-pinchings of their shoots to keep them within bounds. Their roots have come up so freely to feed on the summer surface-dressings given to them in June and July, as to form circular ridges round and inside the edges of the pots, 2 or 3 inches above their rims. Now, in the usual course of culture followed here, these masses of fibres, now nearly inert, would be removed in October, with the mould beneath them to 3 or 4 inches in depth, and the pot filled up with fresh food in the shape of loam and manure, in which they will at once commence to put forth fresh roots. This Mr. Pearson thinks a "mistake." Following the course of my Apricot culture, these surface roots would remain till spring, and then, after the fruit is set, they would be removed with the surface soil, and the rich surface-dressing used here—horse-droppings and kiln dust, saturated with liquid manure—applied. The question is, How long Peach trees, which devour so much food, can be kept in vigorous health with such light nutriment? which seems to me at present like feeding a labourer with rich soup and no beef.

Unfortunately, like all horticultural experiments, it must be some years before we can know to a certainty if spring and summer dressings only, without the renewal of the soil in autumn, will keep such vigorous feeding trees as Peaches in health for as many years as the observance of the top-dressing practice has done here. If a field on being ploughed 6 inches deep for ten years gave a produce of five quarters per acre, and would do the same for a like period if ploughed only 3 inches deep, it would be a saving of labour. If we adopt the surface-dressing practice we shall, therefore, save labour.

In trying the experiment it would be prudent to remove the surface roots (if they are abundant), and mould in the autumn rather than in the spring. My trees have such mounds of them above the surface, that their removal in spring might be too severe a shock to the tree, although I have not found it to be the case with Apricots. As soon as the surface roots are scraped off some surface-dressing should be applied.

In all that I have written I have called the autumn renewal of compost "top-dressing," to distinguish it from the spring and summer dressing, which, as it is always placed on the surface, I have called "surface-dressing." The two words—top-dressing, are not elegant, but their meaning seems plain enough. It is renewing the soil at the top instead of at the bottom of the pot, as usual in repotting. Mr. Pearson thinks the term "very incorrect." I fear I am too old to adopt any other. There is nothing paradoxical in my recommending hard borders for Peach trees, and in the same book the annual renewal of the surface soil in pots. Only one-fourth of the soil is renewed, which is made, by ramming, nearly as solid as the mass of earth the principal roots of the tree are in, in the undisturbed earth in three-fourths of the depth of the pot. The truth is, my mind was led to the hard-border system by observing the healthy effect of the compressed earth in pots on Peach trees, and at the same time observing Peach trees growing in a loose rich soil in a poor state of health, full of curl, and aphids, and spider.

I commenced the experiment six years since by planting six standard Peach trees in one of my large orchard-houses (24 feet wide), three on each side of the central path. The borders, of a dense calcareous clayey earth, were so hard that it was a difficult task to open the holes. The trees were planted, a small quantity of loam and manure being put to their roots "to give them a start," as my man said, and then the holes were filled in, the surface rammed, and left nearly as firm as it is at this moment. I have just paid a visit to these trees. They have been so vigorous all the summer as to require much summer-pinchings—two, three, or four times. Without this care every shoot would have been from 6 to 7 feet in length, as is the case with a tree with its shoots not pinched in. The border can only be compared to the old-fashioned clay threshing floor, so

hard is its surface. I confess that my idea when I planted these trees was merely empirical. I could see the *rationale* of compressing earth in pots, to give as much food as possible in a confined space; but I candidly acknowledge that I cannot even now account for my Peach trees being so vigorous under circumstances so incongruous and against our received notions. I hope one day to have a jury of friends to examine the roots of these trees carefully, and give the world the reason why. I have endeavoured to do it by taking up a tree or two last winter, but I could not come to any satisfactory conclusion.—THOMAS RIVERS.

VIOLA CORNUTA PURPLE AND MAUVE QUEEN.

"When doctors differ, who shall decide?" The above two Violas have each their admirers; many speak highly of the former, and many equally so of the latter. Of the latter Mr. Wills sings the praises so highly, and speaks so lightly of the former, that one would imagine it to be next to worthless; but as one story holds good until another is told, allow me to tell my tale of Purple Queen, and sing its praises in the same strain as Mr. Wills; but I certainly will not be guilty of speaking so lightly of the Mauve. I may state, and I think without fear of contradiction, that 40,000 plants of Purple Queen may be found in the gardens of Welbeck, Worksop Manor, Thoresby, and Osberton. This will speak at once for itself of the estimation it is held in here.

Now, at all of the above places both varieties are grown, and Purple Queen is considered the better of the two; indeed, at Thoresby, where Purple Queen has been truly magnificent, Mauve Queen is looked upon as scarcely worth growing beside it. At Wentworth the same variety is charming; while at Liverpool, Kew, and other places I am told it has been very fine indeed. I was told by a lady well-known to be a most excellent judge of flower gardening, that on her visit to Kew it was the most charming thing there at the time. At all the places above enumerated Purple Queen has been fine; and those who have visited Osberton, and seen it in its mixtures, can speak for themselves of its merits. It is a most singular fact that not one dozen plants have died during the whole of the season, and it is considered by many to be much the better grower of the two. For my own part I must say they grow so much alike that it is difficult to tell them apart. Of the two, Purple Queen is the more free-flowering with me, but both have done well.

In summing up the controversy, it appears to amount to this—that Purple Queen does better in and around "The Dukeries," while Mauve Queen does better in and around Cheshire and Lancashire; and if all who condemn one and praise the other were summed up, it would be found there would be six for one and half a dozen for the other.—EDWARD BENNETT, Osberton Hall, Worksop.

[We quite agree in thinking the two varieties are very similar; so closely so that it was with great difficulty we could discern the difference between two excellent specimens sent to us for the sake of comparison. Purple Queen has slightly narrower petals and the shadow of a shade more purple than Mauve Queen. The controversy need not be continued, for both the varieties are good.—Eps.]

CHASSELAS NAPOLEON GRAPE.

In your report of the Paris Pomological Congress you notice a Grape exhibited by me in my collection of fruit—namely, Chasselas Napoleon, as being handsome and beautiful, and little known in England. This character certainly is no more than the variety deserves, and I advise all Grape-growers to add it to their collection of useful Grapes. I send you by this post a few berries, taken from pot Vines, ripened so far back as April, in order that you may prove its flavour. You will observe that it is invariably one-seeded, which makes it agreeable to eat. As a profitable hardy midsummer Grape, so far as I have proved, it has no equals in the golden section except the Muscats. Intimately acquainted as I am with most of the French varieties of Grapes, I consider that this above all others is most worthy of notice in the section just named. M. André Leroy once sent me fifty varieties of Grapes, which were planted, fruited, and tasted, and I give you my selection from the number—namely, Chasselas Napoleon, Olivette Noire, Malaga Rose, Chasselas Duhamel, Gromier du Cantal, and Ulliadé,

Of these permanency has been given to the first three only; but where utility is not an object, the others may be added for variety's sake. The Grape in question is known in France also by the names Gros Perlo and Pansé Jaune; but it is only since I showed it in Paris three years ago that it has become popular.—H. KNIGHT, *Pontchartrain (Seine-et-Oise)*.

[The bunches which Mr. Knight exhibited of Chasselas Napoléon at Paris were very large, as much so as the finest bunches of Buckland Sweetwater we have ever seen in England. We think he is wrong in giving Pansé Jaune and Gros Perlo as synonyms of the Chasselas Napoléon, the former being one of the worst setting Grapes in cultivation, not excepting the Morocco; and the latter is very deficient in flavour, a character so at variance with Chasselas Napoléon. It is true there is a great similarity between the three; but as we have grown them separately, we have found them to be perfectly distinct.—EBS. J. or H.]

CULTURE OF ROSES ON THE MANETTI STOCK.—No. 3.

REMOVAL OF ROSES.

WHEN people cannot afford to manure Roses adequately, it is a good plan to remove them annually to fresh ground where Potatoes and Cabbages have been grown previously. With me it is a rule to "let well alone;" hence I do not unnecessarily remove plants. I always keep a large supply of different manures by me, and manure the Roses according to their individual requirements, and according to their presumed exhaustion.

In strong ground of a rich character, annual or biennial removal of Manetti Roses is necessary to stop extra growth and blindness. The root-pruning produces what those excellent writers, Mr. Fish and Mr. Abbey, call "fibrous network." Strong roots may produce wood, but you must have a network of fibrous roots to produce flowers. The same is the case with Strawberries. You must have superficial roots besides the perpendicular roots. In rich ground Manetti Roses require but little manure. The annual removal, however, would, of course, stop the Rose from making its own roots, which matters not; for "own roots," when they become strong, will destroy or deteriorate the Manetti roots. The same is the case with Pear trees on the Quince stock. If Manetti or Quince roots are required, in both cases "own roots" must be kept cut off.

WINTERING PLANTS.

Straw or litter are the best frigidum for the roots. If these and a few inches of wood are protected, zero can do no great harm beyond killing the upper wood. I put the straw along the line of Manetti plants, and draw the earth over the straw in much the same way as for Potato-pits, digging a deep channel between the rows to draw the water from the roots. All my Roses were served so last winter. The severe frost killed many to the line of protection, but no farther. I cut down the injured plants, and then put the straw over them, and the earth over the straw, to shield them from the fierce wind-stroke, which is most pernicious after severe frosts. I have now plants 12 feet high that were cut down to the level of the soil. After the winter was over I levelled down the soil thrown up, and well stirred the ground to promote root-action. In the north of England I think it would be a good and safe plan to take up all kinds of Roses in November, lay them up "in ordinary" by the heels, and place straw in severe weather over the heads, stocks, and roots. It is necessary to give extra protection to Tea Roses, and also to Tea-scented Noisettes. In ordinary winters a little straw over the roots may be sufficient. In frosts so severe that the thermometer falls to zero, or nearly so, you can run your fingers through the straw into the earth up to your knuckles, when beyond the straw line you can make no impression with an iron bar. For delicate kinds a north wall is not so dangerous as a south wall by reason of radiation under a south wall, which is very destructive to tender plants.

TRANSITION FROM MANETTI ROSES TO THOSE ON THEIR OWN ROOTS.

If this is desired, the plants must be earthed over the point of union at least 2 inches, and be wet-mulched in summer, and dry-mulched in winter—in the former case to prevent the sun burning up the young rootlets, and in the latter case to prevent the frost injuring them. The ground should not be disturbed near the stock. If it is desired to multiply Roses on their own roots, the Manetti Rose plants must be cut down and

made to branch, and earth must be piled up around the stems like a mole-hill, sufficiently high for the branches to strike. In three years they will be established Roses on their own roots. They should then be stripped off, and the Manetti Rose planted again. The same may be practised with Roses on their own roots. There is a great tendency in Manetti Roses and Pear trees on the Quince stock, to perpetuate themselves on their own roots, but, in both cases, as already stated, when these predominate, they will, unless both roots are collateral, deteriorate the deeper roots of the alien stock.

THE STOPPING OF GROSS SHOOTS.

If the tree is complete, and in health, the gross shoots from the base may be cut out. I allow them to form buds and bloom, and cut away, after blooming, some of the inferior "worked" wood. I call these gross shoots "the repairers." If they go blind, which is often the case, I cut them to the level of the plant. They will sometimes break and bloom. That is not my chief object. My object in cutting them is to consolidate their wood, and to enable the working wood to bloom longer. Judgment alone can decide when and how this sort of shoot is to be treated. If the worked wood has suffered from chlorosis, it is essential to encourage these "goumand" shoots as replacers of the wood that has been injured, and which eventually must be cut away. If not badly affected you may take your first crop of flowers off the diseased wood, and then cut it out, leaving the gross shoot the whole force of the stock for maturation. A terminal leaf is in some measure equivalent to a bloom. If the wood is firm up to the terminal leaf there is no necessity to cut it with a view of stopping the sap back to complete the lower wood of the shoot.

As regards pruning, Manetti Roses require but little. They should be pruned in the same way as established Hybrid China, Hybrid Bourbon, and strong-growing Noisette—that is, their tops should be taken off to a good eye, and the lower wood thinned out when it requires it, and the side shoots should be shortened a little to a good eye. Observe, no Rose plant should be pruned at the time of planting.

MANURES.

I use pond mud mixed with cowdung—of this I have bought two hundred loads—cow manure by itself, guano, soot, nitro-phosphate (blood manure), superphosphate, and, in the dry, chalky soil of Rushton, I use half-inch bones with success. The land here is a moist sandy loam, and does not require bones. I believe cowdung, farmyard manure, night soil, and Peruvian guano to be the best. Pig manure is also very good, but that goes for Potatoes and Cabbages here.

I must now say a few words with regard to the strength of manures. Guano should be sown on the land in winter, that the rains may dilute the uric acid. If plants are manured with guano during growing time, it must be greatly diluted with water. One handful of Peruvian guano to a stable-bucketful of water is strong enough; more would probably burn the fresh-made rootlets. Saltpetre and nitrate of soda are excellent to produce healthy and verdant foliage. They are both well suited to dry lands. For pot plants saltpetre is excellent. One table-spoonful of saltpetre dissolved in a pint of water will beautify the foliage of a pot Rose. Liquid manure diluted and put on when the plants begin to grow, is good, and wood ashes spread in winter on dry ground, will keep the soil moist, as they attract and retain moisture. I think a dressing of common salt would be found beneficial to dry soils. If land is short of vegetable matter, a crop of Turnips chopped and dug in, will do much good. I may say, in fact, that anything which offends the olfactories is good for the growth of Roses.

After my remarkable first series of bloom here (Okeford Fitzpaine), I gave my Roses a dressing of Peruvian guano, and nitro-phosphate, half and half, put on when I perceived the rain coming. As soon as the rain was over I levelled the surface of the soil, and great has been the result. The Roses began here on the 8th of June, it is now the 16th of September, and they are magnificent.

PEGGING DOWN ROSES.

I have not practised this. I prefer standing bush plants, for they can be kept cleaner, and more plants can be grown, as there is more room overhead. Mr. Perry, of The Cedars, Birmingham, I believe, has practised "pegging down" Roses with great success. If persons have only a few plants, and wish to make a greater show of them, I fancy espalier fashion, and interlacing the branches, would be a good plan. By bending

the shoots from the perpendicular, as in fan-training, the eyes of such as in an erect position would be dormant, would break. I suppose the Dutch hoe is the best implement to clean the ground among pegged-down Roses. No doubt, Roses may be pegged down, so as to strike on their own roots.—W. F. RANCLIFFE.

CALCEOLARIA CULTURE.

MR. LUCKHURST (page 235), gives me credit for advocating a robust and vigorous growth as a remedy for Calceolaria failures; but I wish it to be understood that I consider a medium good growth partly a remedy, though not altogether so. I think, that because the Calceolaria will bear a large amount of rough treatment, it very often receives more of such usage than is good for it.

I am aware that every gardener has not enough pots to hold all his bedding plants in spring, and he must therefore resort to such makeshifts as planting in a cold pit or frame. Only two years ago I found myself short of pots, and was obliged to adopt in the case of part of my Calceolarias the very plan that Mr. Luckhurst has detailed. I planted out a two-light frameful in early spring, kept them stopped, watered, &c.; and at planting-out time they were fine plants, such as your correspondent describes. They were lifted with due care, and placed in the centres of the beds, where the tallest plants were wanted, and the outsides of the beds were filled with pot plants; but plant as we would, the centres of the beds could not be made to look well and tidy, for the plants were too large, and, the weather being dry, it was long before the roots took hold of the soil. The pot plants, on the contrary, did well from the first, and never seemed to sustain any check whatever.

I was so much disappointed with the plants taken from the frame, that I determined never to adopt the same plan again so long as I could obtain pots for them. It was not till after midsummer that the bed looked well, and the pot plants were in no wise behind the frame plants, but rather a little before them when in bloom. I consider that the growth of plants in pots is better consolidated and more sturdy than is the case with those planted out in pits or frames; but by no means do I advocate a stunted growth. There is a medium which I like to see.

I think that if people would pay as much attention to the Calceolaria as they do to Verbenas and other bedding plants, there would be less complaints about its dying off. I quite agree with your correspondent that he can obtain fine vigorous plants by his mode of treatment, and I know it is practised in most places; but I do not like their being covered up nearly a fortnight at a time from the light, neither do I like the use of leaf mould for them; it is too light, and may contain the germs of fungus. I have employed it in many different ways and for many purposes, but now I never use any.

I cannot say that I plant Calceolarias by the thousand, but I plant out a few hundreds in a season, and as yet I have not lost a single plant this year. As I have before remarked, there is nothing new in my treatment, but rather the reverse.—ROBIN ROVE.

"ROBIN ROVE" seems to advocate not using leaf mould, but in that I disagree with him. I prefer leaf mould one year old to using manure. I agree with Mr. Luckhurst in liking plants which have never been in pots, and with Mr. Osborne as to not allowing them to become dry and in keeping them well stopped.

I do not claim originality for my mode of culture, but for fourteen years I have grown many thousands of Calceolarias yearly both for private gardens and for sale.

I always strike some thousands of cuttings both in autumn and spring; and I have a favour for the spring-struck ones if there exist conveniences to keep them growing, for I never like to see Calceolarias exhibiting the slightest tendency to become pot-bound and to flag. If they do, you may take them to the rubbish-heap, for they will to a certainty be infested with aphides sooner or later, and will never make good plants.

Spring cuttings I generally prepare in the following manner. In October I pot some of the healthiest plants, but do not cut them, stand them in a cool pit on ashes, and keep close for a few days, sprinkling them twice a-day; they will soon strike fresh root, and I then give them air, gradually increasing the amount till that is as great as possible. The soil I use is leaf mould, loam, rotten turf, and sand. I keep them in the pits without protecting material over the glass as long as the

severity of the frost is not too great, in order that they may not be covered up many days in the dark. About the beginning of January I put the plants in a gradually increasing heat, and by the end of the month they begin to grow. In the beginning of February I have a bed made up with leaves and a little manure, so as to afford a moderate heat, and insert nice little cuttings in pans 10 or 12 inches square, which are then packed in the frame. In a few days the cuttings will indicate by their growth that they are rooted, and will require the growing points to be very carefully pinched out. Let them remain a few days and break, and they will then be strong little plants.

Next prepare turf pits as recommended, or frames, and partly fill them with leaves, just to afford a little bottom heat to keep the young plants growing well; and lay the soil a few inches thick all over the leaves to form a good rooting surface. The soil employed for this purpose should be composed in the proportion of one barrowload of leaf mould to one of good loam and one of rotted turf, with the addition of one peck of sand run through a coarse sieve and well mixed. Keep it a day or so in the frame to become just warm, then take the plants very carefully from the pans, and plant them about 4 or 6 inches apart as room will admit. After planting sprinkle them regularly, and keep the frame closed for a few days; then gradually give them air.

During April the plants will require to be stopped twice, and by the middle of May they will be good, strong, bushy plants, ready to be planted out in the beds, previously prepared by taking from them a little of the sour soil and replacing it with some leaf mould, sand, and loam. Give a good watering just to settle the soil about them, and no aphides will attack them, and very rarely will you lose a plant.

The later plants are struck in autumn the better, but if they are potted at all I never like potting them before the spring. If they are potted in the winter, which is too often the case, they get starved and dry, and grow poor brown-leaved skeletons, never again to acquire that green robust habit so needful in Calceolarias. In March and April they are excited to a little growth, then in May are planted out, and dwindle along with the dry hard wood they have made, and become blighted. Some die at once, others flower a little, but are seldom of long duration or beauty; but if spring-potted, or not potted as Mr. Luckhurst and Mr. Osborne recommend, they will be far better than the others.—CHARLES OSMAN, *Sutton, Surrey.*

ROSES AND OTHER GARDEN PRODUCE IN ILLINOIS.

I OBSERVE in your pages considerable discussion about *Maréchal Niel* Rose. We have had it two years, and find it of its class unrivalled; the plant healthy, vigorous, free-blooming, whether on its own roots or budded on *Manetti* or *Russell's* Cottage, a stock we prefer to the *Manetti*. Its flower-bud is large and showy; the flower opens well, is very double, and has a superb yellow centre, and a most delicious perfume of the *Magnolia* order.

From fifty small plants set last spring in the open ground, with no special care, both budded and on their own roots, we have removed, for the sake of shoots for budding, at least one hundred flower-buds, besides scores of buds and blooms all through the season. The weather this season has here been decidedly dry, and yet in vigour and free-blooming the character of *Maréchal Niel* has been unimpeachable. No mildewed leaf has ever appeared on it, though in the east I have heard fault found with it in that respect.

Isabella Gray is nearest *Maréchal Niel* in colour; the bud and tint rather a deeper yellow, but the flower is much smaller, and the habit quite shy, though we get a moderate bloom of it on young plants in the open ground. In wet weather, however, *Isabella Gray* does not open so well. *Chromatella*, in the open ground here, proves more shy than either of the above. Latitude about that of Philadelphia, and 1200 miles inland; soil dark, deep alluvial prairie, fine-textured sandy clay, or clayey sand.

The season here on the whole has been very pleasant. Fruit crops have been equal to the average; Apples have been our poorest fruit crop, as the trees bore very heavily last year. Peaches are mostly brought from one hundred to two hundred miles south, and I would say that not less than fifteen thousand boxes of one-third of a bushel have been sold in our little city of fifteen thousand inhabitants, at an average price of 1 dollar

per box. Grapes in season now (19th of September) chiefly consist of Concord, selling at 10c. per lb. Apples bring from 50c. to 1.50 per bushel. Potatoes are very light from ravages of a vile new pest, the Colorado Potato bug (*Doryphera 10-lineata*). This is their second year here, and they have brought up the price from, say, 50c., usually at this season, to 1.50 per bushel.—F. K. PHOENIX, *Bloomington Nursery, Illinois, N. America.*

PROPAGATING MRS. POLLOCK PELARGONIUM.

MANY and various are the plans which from time to time have been advanced as necessary for the successful culture of Mrs. Pollock Pelargonium, and, doubtless, all of those plans possess more or less of merit, and will prove successful in a greater or less degree in proportion as they are supported by that perseverance which invariably commands success sooner or later.

A short time ago a recommendation appeared in a contemporary not to attempt the propagation of cuttings of this variety in the autumn, but to take up the plants from the beds, pot them, and make cuttings in the spring. The reasons advanced in support of this plan were, that the plants would not be so likely to die off during the winter, they would take up less space, and would also be very ornamental in their unpruned state. Doubtless the object of most persons becoming the possessor of such a bedding gem as Mrs. Pollock is not simply to take a cutting or two for specimens, but rather to increase the stock as largely and as quickly as possible. Keeping this in view, I think it will be found that the plan quoted above is not at all an advance but rather a retrogression. I may here state, as illustrative of the fact that this variety is not more difficult to manage than any other if fairly treated, that I have now upwards of four hundred plants, all descendants of one small plant received in the autumn of 1863. A slight account of the mode of culture which is followed at this place may, perhaps, prove acceptable to some of the readers of "our Journal."

The cuttings are taken off as early in the autumn as they can be spared—i. e., as soon as the chief beauty of the garden is over. They are generally struck in pots fully exposed to the air, and they are not housed sooner than any other sort, but are kept out as late in the autumn as the weather permits. At the time of taking cuttings the plants are pruned closely, and allowed to remain in the beds till they have again started into growth, which they will do quickly; they are then taken up and potted in a rich sandy loam, and, until the time of housing, are placed in a cold pit, the lights of which are taken off during the day. The autumn growth made is short and sturdy, and the plants generally keep well through the winter. They are afforded as much light and air as possible, and great care is taken in the watering.

Early in the spring, as soon as the autumn-struck plants have made a slight growth, and present a somewhat more animated appearance than they did during the winter, the tops of all that are strong enough are cut off, and struck in a moist growing atmosphere with a lively bottom heat. The plants from which these cuttings are taken will then appear like so many naked stumps. The soil these plants are in is kept rather dry for a few days, and the wounds caused by cutting off the tops are carefully sealed over with a little of Thomson's styptic. In a short time the plants will break all down the naked stems to the soil; a slight shift now into a somewhat richer soil causes them to grow freely, and to form good plants by the time they are wanted for the beds.—EDWARD LUCKENST, *Egerton House Gardens, Egerton, Kent.*

THE WORM-EATING SLUG.—All slugs are not injurious. The Testacella is by no means rare or uncommon, but is seldom observed or captured, in consequence of its subterranean habits. To find it, you must either rise at the dawn of day, or make nocturnal explorations equipped with a powerful lantern. It may be discovered, if thus sought for, in most of the market gardens round about the metropolis, and it is distributed generally throughout all the western counties. It has been taken at Youghal and Bandon, in Ireland, and at Madeira, the Canaries, and in Western Europe. The lingual ribbon of the Testacella is extremely large and wide, and made up of over fifty rows of minute teeth, fifty-one in each row. The teeth are conical, evenly curved, and barbed at the point; each tooth has a projection on the middle, from which the posterior end thickens.

Imagine any living creature getting into such a trap as this—why, a shark's mouth is a mild kind of painless trap when compared with this slow-moving slug's. If unacquainted with this mollusk's habits, an examination of the mouth would at once lead us to infer the carnivorous propensities of the creature, and a closer insight into its ways and habits would show our judgment to be founded upon correct premises. The Testacella is exclusively a destroyer of living things, the earthworm being the game that it hunts with untiring assiduity. It follows the earthworm through its underground tunnels, as the mole hunts grubs. A very slight inspection of this curious slug will serve to show us how admirably its organisation in every way adapts it to follow out its earthworm-hunting propensities. The body is extremely slender, and when stretched to its extreme point of attenuation, becomes so small and wire-like, that progression through tiny holes in the soil is rendered easy in the extreme. It creeps stealthily upon a worm, seizes it with its terrible toothed trap, and slowly swallows it, much after the fashion of a snake when bolting a frog, the victim being sucked, so to speak, by a steady introversive action of the armed tongue into the gullet. I found the remains of several earthworms in the slug I captured in my garden. Dr. Ball, in describing the habits of the Testacella, says, "I first became aware of the Testacella preying on worms, by putting some of them in spirits, when they disgorged more of these animals than I thought they could possibly have contained. Each worm was cut, but not divided, at regular intervals. I afterwards caught them in the act of swallowing worms four and five times their own length."—J. K. LORD (in *Land and Water*).

EFFECTS OF ALTITUDE AS REGARDS FROST.

TRAINING FRUIT TREES NEAR THE GROUND.

As the frost of October 3rd-4th was no doubt general, it would be useful to know how it affected tender plants in different positions. We suffer very much from cold winds, and that makes the garden late without help artificially given; but our elevated position has often enabled us to have Dahlias and other tender plants a month or six weeks after they have been killed in the valleys. Taken as a whole, our flower gardens on the Friday and Saturday afternoons showed no traces of the frost of the mornings, and even the Perilla came well out of the ordeal. The sharpness of the frost may be judged from the fact that Spinach, Strawberry, and Pelargonium leaves broke when I attempted to bend them.

Such a visitation might also be made useful in leading to a comparison as to how the frost affected plants, even when placed at slightly different altitudes from the ground. I am not so much alluding to altitude in general as to mere lowness, or rather nearness to the ground and greater distance from it, in the same locality. No one who has trodden the snows on mountain tops, or even looked up to these snows, and yet has suffered from heat at their base in summer, but would have the conviction forced upon him as a mere matter of fact, that the nearer the great bulk of the earth he was the warmer it was; and the higher he was in the atmosphere the colder it was. It is not necessary here to enter into the question as to how this must be the case, if we give due prominence to the heat of the sun being reflected and radiated from the surface of the earth, nor as to how that may again be affected by the nature of the soil and the covering which nature or cultivation gives to it. Granting the truth of the proposition that the higher we go the colder it is, what puzzled me many years ago, and set me to make notes on the temperature close to the ground and for several feet above it—from 1 foot to 30 feet and more from the surface—were not only the exceptions in a limited space that came against the general proposition, but the want of uniformity even in these exceptions.

I have long lost the notes of these observations, but the next-to-uniform results were these:—In a warm sunny day the air was warmest within a foot of the ground, and all the warmer in proportion to the bareness and hardness of that surface. If such a day was followed by a warm cloudy night, the air near the surface was still the warmest, as the clouds arrested the free radiation of heat; and in such a night there would be scarcely a dew drop deposited, as no stratum of air became sufficiently cool to condense the vapour contained in it. But let us have such a cold breeze as that on Thursday, sweeping away heat from the surface almost as fast or faster than the sun added to it, and let that be followed by the clear cold sky of Thursday night, the stars shining with a Christmas

brilliance, and ere long the surface of the ground by free radiation of heat becomes colder than the surrounding air, and by degrees the lower strata of that air become colder than the strata above them, so that the difference is clearly indicated by the thermometer, and also by the effects produced on vegetation, showing clearly how dwarf Dahlias and Beans on the ground suffered on Friday morning, whilst tall Dahlias and staked Beans escaped uninjured. Some years ago I had a flat bed of Vegetable Marrows blackened early in a similar night, but at the back of the same bed the parts of the plants that clambered over some sloping hurdles to the height of $3\frac{1}{2}$ feet, escaped without a mark of the frost.

Something, no doubt, was also attributable to the dryness of the air, and the dryness of the soil, owing to clear bright days previously. There had even been little dew for several mornings. The soil became so dry that to prevent flagging we watered Calceolarias, Salvias, Dahlias, and in some cases Verbenas and Lobelias. The dwarf Dahlias that were watered on Tuesday suffered less than those watered on Wednesday. The planting of Endive on elevated ridges, merely on the score of dryness, and also as keeping the plants less under the influence of the free radiation of heat, will enable them to pass through the winter often, when those planted on the free level ground are all destroyed by the frost.

Some years ago I expressed a strong conviction that much will yet be done even with fruit trees a little tender, by planting and training them near the ground on banks sloping to the sun. I have had no opportunity of carrying out the idea, but I feel sure that it will succeed in the hands of those who try it, but *only* if the above simple facts be kept in mind. They are of importance to those who on this principle are going to grow fruit trees with only one or two fruit-bearing stems, one of the best plans for obtaining great variety in little space; but if the trees be trained near the ground they will have all the advantages to be gained by heat in summer, yet if merely trained over a flat surface or a sloping bank, they will have the disadvantage of extra cold for the blossom in spring, and extra cold in the ripening time, if that is late in autumn. It is not easy to have all advantages, but these may be secured in training near the surface, if a frame and covering are placed over the trees to arrest free radiation at night in spring and autumn. The covering would then do artificially what the clouds do for us naturally; and though in all such cases glass would be the neatest and could remain permanently, calico or something of that kind when used only at night would be the most effectual.

With a covering, the colour of the surface, whether earth, concrete, stones, or tiles, is important. The black would be the best both for absorbing and radiating the heat. Without this covering a dull stone colour would be as good as any, as weak alike in absorbing and radiating heat, and white should be avoided, as the reflection of heat would be apt to scorch much that was near. For want of generalising on these simple matters much disappointment has been felt by those who attempted to forward fruit, &c., by simple means.

For instance: let me take the case of Strawberries alone. One person had white tiles placed between the rows on which the bunches of Strawberries should rest. The tiles did little good, harboured slugs below them, and did harm on the whole to the fruit, as the excessive heat reflected on a sunny day almost scalded and parboiled them. Another used dark-coloured slate, and on the whole was more successful, as the crop was forwarded a few days. What was wanted in the latter case was the covering to arrest radiation. With dark slates, and a thin covering put on early in the evening, say by five o'clock, and removed next morning by eight o'clock, I have gathered Strawberries ten days earlier than from the exposed ground. In such a case the heat absorbed by the slates was given out gradually during the night, and was prevented escaping by the covering arresting radiation. Such a covering would have kept Dwarf Kidney Beans safe that were injured on Friday. With merely a rough littery straw rope twisted through the tops of the stakes of Scarlet Runners I have frequently had a row in gathering for weeks after the rows fully exposed had been injured.

What I chiefly wish to impress on the minds of those who enthusiastically imagine they are to effect great results with fruit trees trained within 9, 12, or 15 inches of the ground, is that one of the elements of success will be protection in spring and autumn, and more especially the former, as frequently in such times the general rule is reversed, and the nearer the ground the cooler it will be at night. This is the reason why

in many cases the lower portions of exotic trees and shrubs are injured, whilst the upper parts of the trees escape. Many other reasons may be assigned when the extreme cold near the surface produced by radiation is apt to be overlooked.—R. F.

PROLIFEROUS FERNS.

It would be extremely interesting if any of the numerous readers of THE JOURNAL OF HORTICULTURE would from time to time give a description in its pages of any new forms of proliferous Ferns that may come under their notice. These curious inhabitants of beautiful Fernland are, year by year, multiplying to so great an extent, that we wonder how far we owe them to cultivation and how far to Nature.

For myself, I have never found more than one true proliferous Fern, and on this single specimen (a *Polystichum angulare*, found growing in a spot far removed from any other plants of the same species), I did not discover bulbils till I had cultivated it for some months. The plant is a handsome vigorous form of the biserrate group, and the bulbils it has at present thrown out are confined to the axils of the lowest pair of pinnae. The pinnae are not attenuated, or so profoundly decomposed as obtains in the group of true proliferum (which belongs rather to the acutilobe than the biserrate forms), I have therefore named my variety *biserrato-proliferum*, instead of *proliferum-biserratum*, thus marking the distinction.

I cultivate in my fernery seven forms of proliferous *Polystichum angulare*:—

1, *Polystichum angulare*, var. *proliferum*. The old Kew proliferum, found by Mr. Choules, of Kew, and supposed to be the foreign species *discretum*, until Mr. Wollaston found his plant in 1853.

2, *Polystichum angulare*, var. *proliferum Wollastoni*. A more sharply divided form, and of much finer growth than the old Kew proliferum.

3, *Polystichum angulare*, var. *proliferum Holeanum*. A magnificent feathery form, with the lower pinnae profoundly tripinnate, and bearing bulbils all up the primary rachis. Found in Devonshire by the respected gardener of Mrs. Hole, of Parke.

4, *Polystichum angulare*, var. *proliferum Footii*. A form as beautiful, and even more sharply divided than *Holeanum*, with abundant bulbils. Found in Ireland by Mr. F. J. Foot.

5, *Polystichum angulare*, var. *proliferum Cranfordianum*. Pretty and distinct, but not so finely developed as the three last forms. Found in Ireland by Mr. Phillips.

6, *Polystichum angulare*, var. *proliferum angustatum*. A gardener's variety.

7, *Polystichum angulare*, var. *biserrato-proliferum*. A handsome and very distinct form of the biserrate group. Found in Devonshire by Miss Nona Bellairs.

To the above may be added—

8, *Polystichum angulare*, var. *proliferum Wollastoni* No. 2, slightly differing from *Wollastoni* No. 1.

9, *Polystichum angulare*, var. *proliferum Padleyanum*.

10, *Polystichum angulare*, var. *proliferum Hardingii*, a tripinnate form.

11, *Polystichum angulare*, var. *proliferum tenue*.

12, *Polystichum angulare*, var. *lineare-proliferum*.

The five last-named varieties are all described in "Our Native Ferns," by Mr. Lowe, to whom I am much indebted for a large amount of Fern news.

To the above thirteen proliferous varieties of the species *angulare*, "J. E. M." proposes to add

13, *Polystichum angulare*, var. *grandident*.

Although my plant of *Polystichum lonchitis* cannot strictly be called proliferous, yet I find by Mr. Lowe's book that Mr. Wollaston has described a variety of *Polystichum lonchitis* as "producing bulbils in the axils of the lowermost pinnae." "J. E. M." also mentions that he has a plant of *Polystichum aculeatum*, var. *cristatum*, which has "this year become proliferous." Any further account of this plant would be very interesting.

To others of the many and wide-spread readers of THE JOURNAL OF HORTICULTURE additional proliferous English Ferns may be known, and it would be a matter of considerable interest to hear upon how many of the proliferous Ferns, in their wild state, bulbils have been found.—FLIX-FEMINA.

HYACINTH AND CROCUS GLASSES.—We have before us some very pretty glasses manufactured by Claudet, Houghton, & Son,

of High Holborn. They are formed either for growing a single bulb or bulbs in groups of three. Those formed in imitation of opal and painted with flowers are especially elegant.

QUANTITIES OF SEEDS REQUIRED.

THE amateur horticulturist is often at a loss as to what quantity of seed he ought to sow. The experienced gardener knows upon how many circumstances this depends, such as the goodness of the seed (to be tested by sowing a few seeds in a flower-pot), the fineness of the soil, and the time of the year, so that no general rule can be given. The evil of a scanty crop is evident, and one too numerous is perplexing. Sometimes Lettuces, Onions, and other crops, come up as thickly as Mustard, nine-tenths requiring to be hoed out.

Perhaps the following table, showing the number of lineal yards which 1 oz. of certain garden seeds will sow, allowing twelve seeds to the foot, may be a guide to the amateur.

Beet	35	Radish	80
Cabbage	124	Parsnip	181
Onion	181	Turnip	320
Carrot	352	Lettuce	555

As a pole of ground has 90 yards of drills at 12 inches apart, it will follow that the 90 yards will require three-quarters of an ounce of Cabbage seed, one-quarter of an ounce of Carrot, one-sixth of an ounce of Lettuce, half an ounce of Onion, half an ounce of Parsnip, &c. These are minimum quantities, and must be increased according to the badness of the seed, and the unfavourable state of the air and soil.

Early-sown Peas require more plants than late, since many never grow, or die, and they branch out very little. The later kinds, on account of the genial atmosphere, and the warmth of the soil when they are sown, combined with their branching nature, require less seed to be committed to the ground. Taking all this into consideration, the following rule will apply for good seed. One pint will sow in December, 10 yards; in January, 15 yards; in February, 20 yards; in March, 25 yards; in April and May, 30 yards.

When small quantities of seed are required, it will save trouble if the following be remembered:—One penny-piece is equal to one-third of an ounce; one halfpenny to one-fifth of an ounce; one farthing to one-tenth of an ounce; and a silver fourpenny-piece (worn by use) is equal to one-sixteenth of an ounce. Thus—the weight of a fourpenny-piece of Lettuce seed sows 35 yards, twelve seeds to the foot. But supposing that a third of the seeds are bad, and the sower does not deposit the seeds evenly, more would be required, and the weight of a fourpenny-piece would suffice for only 15 or 20 yards.

I made these memoranda for my own use, and think they will be useful to others.—L. S.

STEALING A BRANCH OF A PELARGONIUM.

In our last number we published a report of the case in which *Alfred Fisher* was charged at the Bury Petty Sessions with maliciously damaging a Pelargonium at the horticultural show there, which charge the magistrates rightly decided did not come within the words of the statute. On the 3rd inst. Fisher was again brought before the same magistrates charged with wilfully damaging a Pelargonium, the property of the Rev. E. R. Beynon, Culford. It will be remembered that the Pelargonium was a valuable one known as the Lady Cullum, and was exhibited at the recent horticultural show in Bury; and the case against the defendant rested upon the evidence of a boot-closer named Head, who positively swore that he saw the defendant take a cutting off the plant and put it into his pocket. Mr. Grieve, who was the first witness, was further asked if the plant was damaged by the cutting being taken off it. He replied, "Of course the plant is damaged to that amount. The cutting is worth 7s. 6d., and it must decrease the value of the plant to that amount."

The defence attempted was contradictions in minor points of the evidence, probable mistaken identity, want of motive in stealing the branch, and Fisher's previous good character. In conclusion, after some deliberation the magistrates decided upon convicting the defendant. The Mayor said the Bench were fully satisfied of the defendant's guilt, and the majority were in favour of giving the option of a fine, and he would therefore have to pay £5 penalty, 5s. damages, and 19s. expenses, or receive two months hard labour. His Worship remarked

that it was a most serious case, and they felt bound to protect those who sent plants for exhibition. The defendant asked to be allowed time to pay. The Bench agreed to allow the defendant a fortnight to pay the money.

PROPAGATING GOLDEN CHAIN PELARGONIUM ON THE OPEN BORDER.

It may not be out of place to state to the amateur gardener how to propagate with a certainty of success this queen of yellow-foliaged bedding plants.

Golden Chain is well known to the practical gardener as being a shy grower and very difficult to increase to a large stock in a short time, and for such reasons it has been discarded by many, and varieties of freer growth have been substituted; yet I cannot see why this beautiful flower-garden requisite, second to none, should be cast aside by the amateur because he finds it rather difficult to propagate. I will therefore give a short outline of how I have managed my cuttings this year most successfully. The simplest and easiest way of insuring success must undoubtedly be the best way.

For several years I have tried cuttings in many modes and at different times of the year—in pots and boxes, in hot and cold frames, also in the propagating-house with and without hand-glasses, but never obtained a sufficient return for my labour; so last year I resolved to lay aside the propagating-pots, boxes, &c., and out on the open border in the kitchen garden, alongside of Mrs. Pollock and Cloth of Gold, I would prick in my Golden Chain cuttings at the risk of losing all. This was in the last week of July. The result of this trial gave me great encouragement to try again, it being the best batch of cuttings I ever had, and obtained so easily.

Still, I was of opinion that had the cuttings been put in a month sooner I might have had a plant for every cutting. This year I ventured, on the strength of my opinion, to put them in just a month sooner—in the last week in June—and from the day I put them in "they never looked behind them," but went on growing, making roots, leaves, and wood; and when I lifted them three weeks ago for potting I could have taken another batch of cuttings from them. By bedding-out time next year they will be well-furnished plants, not the poor weedy examples obtained by autumn or spring propagation.

Allow me to add that I have often tried the late Mr. D. Beaton's plan of grafting Golden Chain on the Tom Thumb. The grafting answers very well, but takes up too much time. I find that the grafts of Golden Chain, Cloth of Gold, Mrs. Pollock, and others of the same class, if specimens are wanted for show, do well on large plants of Scarlet Queen. By so doing you steal a march of two years over the plants on their own roots, and the wood and leaves of the grafted specimens are much more robust.—R. E., *Womersley Park, Yorkshire*.

THE LONG FIRM.

ABOUT ten days ago, most likely the same Mr. H. Eastwood, salesman, &c., as mentioned by Mr. G. Ware in your last number wrote to me in answer to an advertisement, ordering two tons of Onions, and said he had no doubt that he could take all I had. My answer was, Send a remittance first, or if not do not write again. Suffice it to say I have heard no more from him. No sooner does an advertisement of goods for sale appear in any respectable paper, than one of these gentlemen answers it, ordering at once, and seldom finding fault with the price; but one marked feature in all their orders is, they never want anything forwarded to the address they give, but to be sent to the station till called for, as one of their vans or carts is often there, and to be advised by post.—CHRISTMAS QUINCEY, *Market Place, Peterborough*.

HEATING BY GAS.

[HAVING received numerous inquiries as to the best modes of heating greenhouses and conservatories by gas, we are induced to reprint, with some additions, the following from our tenth volume.]

THE simplest mode is using a gas stove. We have employed such a stove merely to exclude frost from a small greenhouse, and it answered very well. It was a circular stove, with one

Argand burner, and an iron tube instead of glass round the burner. An iron chimney carried off all the noxious gases.

A modification of this is the following :—

This apparatus (*fig. 1*), consists of a burner, *a*—a ring of brass tube—5½ inches in diameter, pierced with fifteen small holes, placed 4 inches above the level of the floor. Over the burner is what may be described as an inverted galvanised iron trough, 9 inches wide, 7 inches deep, and 5 feet long, resting on four legs 4 inches high. The burner is placed under one extremity of this trough; from the other end runs the chimney, which is of three-inch galvanised iron piping, the joints of which are not cemented. This rises 5 feet, and is then carried across the house 12 feet, and finally makes its exit in the kitchen chimney. It must either be carried into a chimney, or, if this is not possible, it should, after being carried across

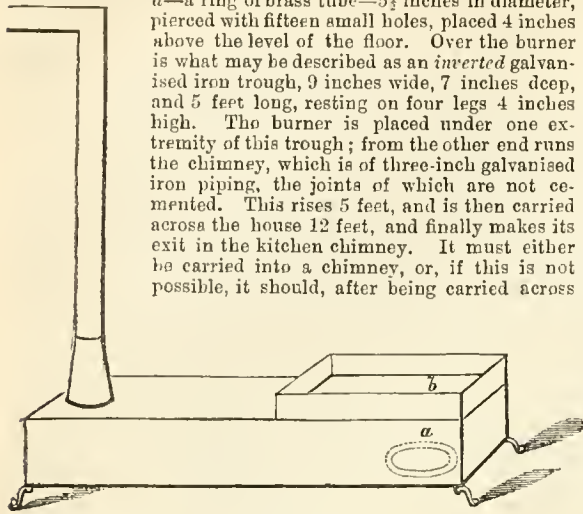


Fig. 1.

the house, rise 5 or 6 feet perpendicularly. Placed on the top of the trough over the burner is an evaporating-pan, *b*, containing about three gallons.

This arrangement, if not ornamental, is cheap and useful, and, with a little expense, may be made more elegant; at any rate, it is entirely removed during the season when the more attractive flowers of summer invite visitors.

The house is a lean-to, 14 feet square, and 13 feet high at the back.

If hot water is employed to diffuse the heat, then the amateur

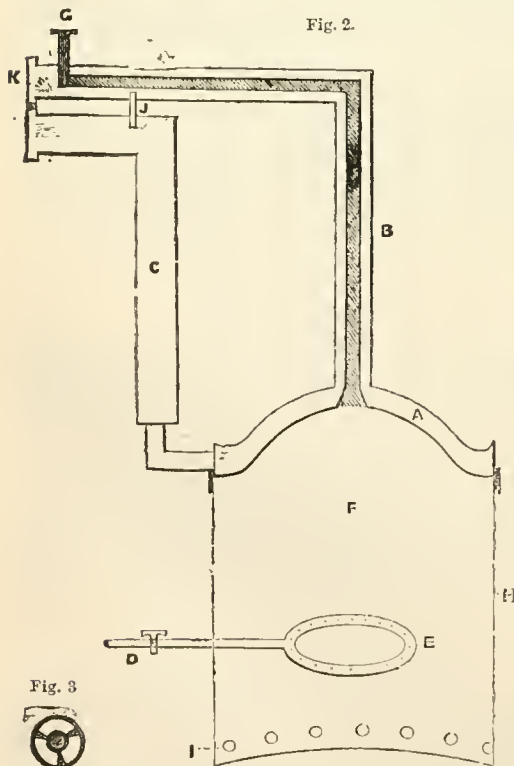


Fig. 2.

Fig. 3.



Fig. 2. Sectional view.
Fig. 3. Inner tube, kept in centre by stays.

has the following modes to select from. The landations of each are the inventors', not ours.

The greatest advantages the following mode (*figs. 2 and 3*), offers are the facts that it requires no expensive brick fixing, that it can easily be moved and adapted to another greenhouse in case of removal; it is clean, can be set in action in a moment, and is easily regulated even by a lady, and, where there is gas, may be kept for any time at a comparatively small cost, when the great expense and trouble of the old mode is considered. There is no risk with gas of losing your plants in consequence of the fires going out, and no time lost in attending to them.

Fig. 2 is a sectional view of an apparatus in a cellar, from which the pipes are led to the greenhouse. *a* Is the boiler, composed of two galvanised iron howls, which may be bought for 1s. 6d. each, and which are soldered together an inch apart by means of a circular ring of No. 11 zinc. *b* Is a flow-pipe, with *c*, a small tube (an inch clear), running through a good part of its length, and communicating as a chimney with the hot-air chamber *f*. *c*, Return-pipe, galvanised iron, 3 inches in diameter, and connected to boiler. *e*, Ring-burner to be bought for 1s. 3d. *h*, Circular tube of sheet iron, same size as outer edge of boiler, and made to take away. There must be a small swing-door for lighting gas. *i* Are holes at bottom for the admission of air. *j*, Stay from one pipe to another. *k*, Union joints. These union joints can be in any part of the return-pipe, but can only be beyond the chimney on the flow-pipe. As a matter of course, the farther this inner tube goes through the flow-pipe, the greater afterwards is the facility for heating rapidly. For some time after heating there can be no heat felt issuing from the tube *c*, proving that the cold water is abstracting all the heat. When the water becomes heated then the warm air escapes; but, by lowering the burner, and a little attention at first to test its capacity, the loss of heat can be brought very low.

Fig. 3 is a section of the flow-pipe, showing how the inch-tube is retained by stays in its place within it.

One advantage, and it is especially an advantage in a small structure, arises from the whole of a gas-heating apparatus being removable when no longer required. If there is a tap close to the wall on the gas supply-pipe, and the pipe attached to the gas-burner is connected with that tap by a galvanised indian-rubber joint, then the tap may turn off the supply of gas, and the stove, boiler, &c., be disconnected from it and removed at any time.

A correspondent states that for several years he has used indian-rubber tubing alone, for jointing both hot-water and gas-pipes. After a severe test, it answers the purpose admirably.

A piece of galvanised indian-rubber tube, of a somewhat larger diameter than the pipes to be joined, is passed over the end of each. The vulcanised tubing is then encircled with stout string (*s*), at a distance of half an inch from the termination of either pipe, and tied up strongly and neatly. The junction has the appearance represented in *fig. 4*. Though so



Fig. 4.

simple, this is a most effectual joint. Taps can be inserted in a similar manner.

The next (*fig. 5*), is in a greenhouse, span-roofed, with glass on all sides, and which is small, being only 12 feet square.

From the outside is laid a wooden box, 10 inches by 5, opening under the gas-burner.

To prevent any smell at lighting there should be a continuation of pipe beyond the burners, opening externally. Letting the gas escape from this for a minute ensures the pipes being full of gas, and, consequently, it is quickly lighted. This addition is important, as mixed air and gas might puff out in the face, besides vitiating the atmosphere of the house. The boiler, &c., are all of copper, except the chimney, which is gas-pipe, and cost altogether about 70s. Three-quarter-inch pipe is recommended, as after midnight the pressure is only small, although quite sufficient. The apparatus is placed under a

stage, and when not in use hidden by a pot of Ivy flat-trained on purpose.

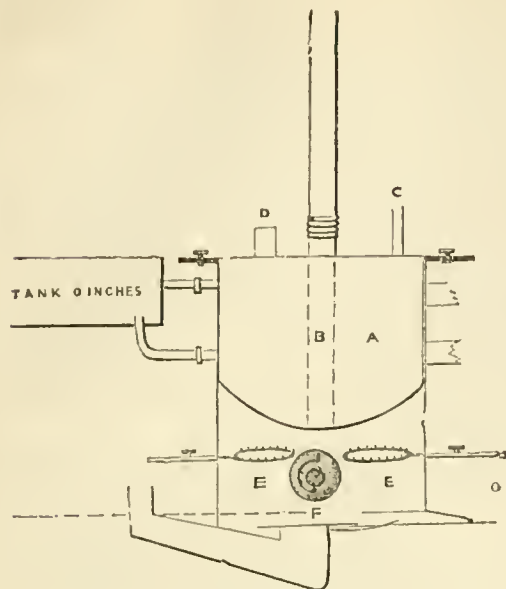


Fig. 5.

WOODEN TRUNK FOR ADMISSION OF AIR.

- A. The boiler.
- B. Chimney of two-inch screwed gas-pipe leading through the water.
- C. Steam safety-pipe opening externally, being of one-quarter-inch pewter-pipe.
- D. To supply water, kept close.
- E. Two gas-burners in rings. One has been sufficient at present.
- F. The door to pass in a light. This is a brass screw plug. Such can be bought at any brassfounder's. The centre has been cut out, and a small piece of tale inserted, as it is satisfactory to see the light. The door has a cross handle.
- G. Is a circular addition to the boiler, and ought to have at least 6 inches of ground round the bottom.

Then there is the following (*fig. 6*), patented by Mr. Clarke, Eagle Foundry, Liverpool. In this the boiler is formed of seven tubes, with a ring of jets of gas beneath. There are seven

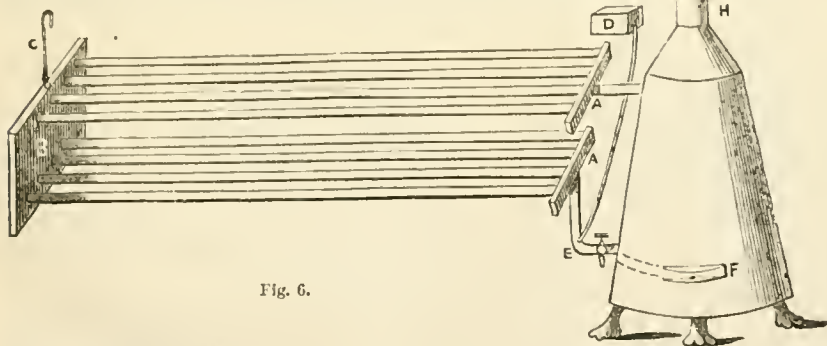


Fig. 6.

small burners, one fixed exactly under the centre of each tube. The boiler is made of copper, and is 12 inches high by 9 inches in diameter; and the water-space is between the tubes upon the same principle as in the locomotive engines. The whole is enclosed in a sheet-iron case just the shape of the boiler, made to fix on the top, and extending down the side nearly to the bottom. This case confines the heat to the outside of the boiler, and to prevent the cold air getting between this casing and the boiler a flange is fixed.

In the engraving, A A are two cast-iron boxes about 9 inches long, and of just sufficient width and depth to admit of an inch-

bore pipe being screwed into them. The top one, of course, forms the flow, and the bottom one the return; B is another box which answers for the return; C is a small air-tube; D the supply-cistern, which may be placed wherever most convenient, so long as it is above the highest point of the pipes, which should be the box B; and E is where the supply-pipe, which need not be more than three-eighths of an inch thick, is generally put in.

There are four flows and four returns, the surface of which is a little more than two rows of four-inch-bore pipes; for the circumference of a four-inch-bore pipe is about 14½ inches, while that of four one-inch-bore pipes is better than 16 inches. Sometimes only three rows are used, and sometimes only two, according to the size of the house. F is a slide for lighting the gas, which can be opened and shut at pleasure. There is a tap for drawing the water off at any time. G is a two-inch sheet-iron tube for carrying off the burnt gas.

This boiler may stand in the greenhouse and the flue-pipe be taken through the roof, or, what is better, if practicable, put into a chimney-shaft. The boiler contains about three quarts of water.

Neither two nor three-inch pipes ought to be used for gas, if economy is to be considered. Supposing for example, the circumference of a three-inch pipe is 9 inches, 1 foot in length would contain 84.82 cubic inches of water. Now, if we use three one-inch pipes instead of one three-inch pipe, we obtain the same heating surface, and have only 28.27 cubic inches of water to heat; consequently a great saving in gas is effected. With this gas boiler one-inch-bore wrought-iron pipes are used, and the frost is kept out of a greenhouse 20 feet long by 15 feet wide for something like 3s. 6d. or 4s. per week.

We have known a lean-to greenhouse 20 feet long, 10 feet wide, and 12 feet high, heated sufficiently to exclude frost throughout the winter, by a gas stove 1 foot square, and 3 feet high. The following cut (*fig. 7*), will afford fuller relative information.

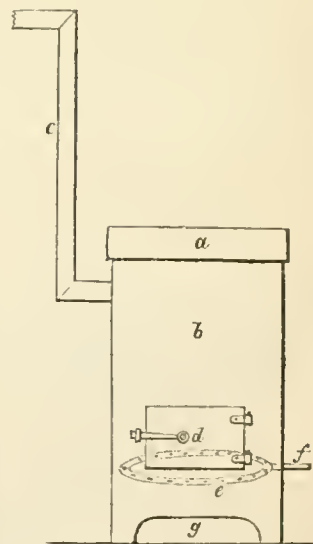


Fig. 7.

- a. Iron dish 3 inches deep, always filled with water before lighting the gas.
- b. The cast iron stove.
- c. Tube, 2 inches diameter, extending the entire length of the greenhouse, and with its mouth outside to carry off the noxious products from the burnt gas.
- d. Door for lighting the gas.
- e. Ring, 10 inches diameter, or gas tubing pierced all round with holes.
- f. Service-pipe, furnished with cock to admit and regulate the admission of gas.
- g. Opening, one on each side, to admit air to the burning gas, there being no bottom to the stove.

ORCHARD-HOUSE TREES IN POTS.

I SENT you last year some notes on fruit trees in pots; I have also this year observed the date of ripening of some of the varieties, and the length of time they continued in season.

Wall fruit has been later this year than last, but by keeping

the orchard-house closer during the day, and shutting up earlier in the afternoon, the fruit has been quite as early as it was last season. Some of the varieties, both of Peaches and Nectarines, have been deficient in colour, although the flavour was

good. If means of heating the house had existed, I would have applied artificial heat and admitted more air during cold, cloudy weather, and, as a consequence, the fruit would have been higher-coloured, whilst, doubtless, its flavour would have been improved.

Sudden changes of temperature are very injurious to the trees, from the time the blossoms expand until the fruit is ripe, especially if the pots are not plunged for any part of their depth in the ground. I do not approve of plunging the pots, and for this reason—I surface-dress the trees in the autumn, also during the growing season, and this surface-dressing is apt to deceive even experienced cultivators, as it may appear quite moist, although the tree at the time may be suffering from want of water, and if the pot is plunged it may be passed over, and the mistake will only be discovered by the drooping of the leaves and young shoots. If the pots are not plunged, a slight tap on the outside will tell which require water, by the difference in sound between those in which the soil is dry and those in which it is sufficiently moist.

Another danger to be guarded against is, when a few days of cloudy weather are succeeded by bright sunshine, and that sometimes accompanied by a drying wind. The orchard-house cultivator must be watchful at such a time, as the trees will require water more frequently. I have watered them three times a-day, and sprinkled the paths with water as often, and if any of the trees hung their leaves I sprinkled them overhead as well. This season we had two very hot days, the 14th and 15th of August, when the thermometer was at 85° and 86° in the shade, and this with a drying wind. All our trees were watered before eight o'clock in the morning, and when I went into the house at eleven in the forenoon, the greater part of them were hanging their leaves because of insufficient water at the roots and a dry atmosphere in the house, and the result was a number of cracked and rusted-looking fruit among the Nectarines, although the Peaches did not suffer much, the downy covering on the fruit acting, I suppose, as a protection. One of the disadvantages of growing these trees in pots is the continual demand for the watering-pot; an hour or two of neglect will spoil the labour of months of care and watchfulness; but then, an orchard-house full of fine healthy trees bearing a good crop of fruit, is worth months of care and attention.

I have pot trees here, their ages varying from three to ten years. The smallest pots are 10 inches in diameter, inside measure, and the largest two men can only move with difficulty; but I shall place no more Peach and Nectarine trees in such large pots. I now prefer these measuring 11, 13, and 14½ inches, inside measure, but I have had large fruit from three-year-old trees in 10-inch pots. Any trees that require repotting are shifted as soon as convenient after the fruit is gathered. Those that are not repotted I surface-dress in October, after removing as much as possible of the old exhausted soil in the pot. This year I turned a number of trees out of doors as soon as the fruit was gathered, and they seem to have ripened their wood better than those that have been kept inside. Some that were turned outside in July to ripen their fruit out of doors, have shorter young shoots and are better studded with flower-buds than any of the others; so that it is a question if confining them to the orchard-house all the year round is the best treatment for them after all. I intend shortly to place all the trees outside, and plunge the pots over the rims in cocoanut fibre refuse, in order that the house may be filled with Chrysanthemums and other greenhouse plants. The practice of moving the trees out of doors in winter is invariably followed by Mr. John Fraser, of the Lea Bridge Road Nurseries, with the best results, although I have no doubt that the fruit would be earlier if the trees were kept in a house from which frost was excluded by artificial heat during the whole of the winter season; but if the house is not heated, then the later the trees come into bloom in the spring, the less chance will there be of the flowers being cut off by frosts.

We had the first ripe fruit on Early York Peach this year on the 10th of August, and I consider this the best early Peach we have; if there are better I have not had the chance of trying them. Early Victoria is not so good, and later. Early Grosse Mignonne is a large fruit of excellent flavour, but it is ten days later. The White Nectarine was the next to ripen, on the 15th, followed by Acton Scot Peach on the 17th, Early Victoria on the 19th, and Early Grosse Mignonne on the 20th. On the 22nd we had Noblesse and Royal George Peaches; Bowden, Cricket, and Murrey Nectarines. On the 26th the last fruit of the Early York Peach was gathered, and the first

Red Magdalen Peach; also Pitmasten Orange, Downton, and Elruge Nectarines. On the 29th Galande Peach was ripe; on the 30th, Hardwicke Nectarine; on the 31st, Pine Apple Nectarine and Rivers's Orange; Bellegarde Peach came in and finished, also Acton Scot Peach and Bowden Nectarine.

On September 2nd Prince of Wales Nectarine came in; and on the 3rd we gathered Royal Charlotte, Violette Hative, and Grosse Mignonne Peaches, and finished the last Noblesse Peaches. On September 5th Victoria Nectarine came in, and the fruit were well ripened without fire heat, being the best flavoured Nectarines in the house, although some of them cracked; but I ought to say that Pitmasten Orange and Prince of Wales Nectarines also cracked to as large an extent as the Victoria. On the 10th we finished Pine Apple and Pitmasten Orange Nectarines, and Téton de Venus Peach; on the 11th we had the first Prince of Wales Peach, and on the 13th Princess of Wales Peach—this is rather earlier than the Walburton Admirable, and is one of the finest Peaches we have, being of the largest size and of excellent flavour. On the 24th we had the last of the Walburton and Late Admirable Peaches; so that we began to gather on the 10th of August, and finished (all except Salway, which will probably ripen about the first week in November), on the 24th of September.

I have said nothing about Plums, Pears, and Grapes, which are also grown in the house. The Vines are trained round the pillars which support the roof. The sorts are Trentham Black and Black Hamburg. Trentham Black is earlier than the Hamburg, but it is not such a good setter, and the berries are more liable to crack and "damp off." All the bunches on the Trentham Black Vines were under 1 lb. in weight, while one bunch of the Black Hamburg weighed 1 lb. 15 ozs., and most of the others were about the same size. The Vines are all in pots. The Trentham Black ripened in the first, and Black Hamburg in the second week in September.

Mr. Pearson says in the Journal of October 3rd that none of the new varieties of Peaches are nearly so good as Grosse Mignonne, Noblesse, and French Galande [a synonym of Bellegarde]. I advise him to give Princess of Wales a fair trial. If I were to select six Peaches and six Nectarines, the sorts would be—Peaches: Early York, Royal George, Téton de Venus, Bellegarde, Princess of Wales, and Walburton Admirable. Nectarines: Hunt's Tawny, because it is the earliest we have, and hangs longer on the trees than any of the others; but it is only second or third-rate as regards flavour, and is more liable to mildew than any of the others;—Violette Hative, Rivers's Orange, Pine Apple, Downton, and Rivers's Victoria, which is the latest.—J. DOUGLAS.

WINTERING TENDER PLANTS IN COLD PITS AND FRAMES.

A CHAPTER FOR AMATEURS.

In many cases cold pits and frames are all that can be commanded for wintering tender flower-garden plants. There is sometimes an outhouse, spare room, or bow-window that can be used as an auxiliary to a pit or frame. With such convenience, indifferent as it may be considered, and really is, it is astonishing how much can be accomplished by judicious management and earnestness of purpose.

In the construction of cold pits to be used for wintering such things as Pelargoniums, Verbenas, &c., the principal object to be secured is dryness, because damp is a far greater enemy to such plants, and one more difficult to combat, than frost. On this account I have an objection to sinking below the ground-level, unless the walls below ground be made perfectly water-tight by cement, and the bottom should be as thoroughly drained as possible. Indeed, it is a good plan either to pave or cement the bottom of the frame or pit to prevent water rising by capillary attraction, in which case there must be holes for the escape of all moisture that may collect inside; and the foundation of the inside should be of open rubble, with a drain to take the water away. Pits sunk a little into the ground and constructed in this way are warmer than when raised above the ground-level; but I would rather have all above the level, and construct the walls hollow, enclosing a stratum of air, which is the best non-conductor.

One of the principal points necessary to success in wintering plants without the aid of fire heat, is that of preparing the plants in autumn. I have already recommended for all cases early and the coolest system of propagation, but this is most especially applicable to the case of those who have no better

convenience than cold frames or pits to winter their plants in. Early propagation allows of the plants being exposed to the open air, and enables them to become thereby robust; and their growth is thus ripened or solidified, so that they are not so susceptible of injury from either damp or cold. They of course become well rooted, which is another requisite to success.

When it becomes necessary to place the plants in the pits in order to be secure from autumn frosts, the lights should be drawn off by day when the weather is dry, not a drop of water should be allowed on the leaves, and they should be kept dry to the drooping point. This brings on a state of maturity before winter, calculated to stand a damp, cold, confined atmosphere and the absence of light with the least possible injury. In placing the plants in the pit, do not over-crowd them. The pots should be washed clean, and where the leaves of such as *Pelargoniums* are crowded, thin out some of the largest of them.

Some dry loose material, such as hay or straw, should be in readiness as winter approaches for covering up with in case of severe frost, and some of the same material should be packed round the sides of the pit; but for this avoid anything likely to heat and prematurely excite the plants by a rise of temperature. When thick coverings over the glass become necessary, the material should, if possible, be perfectly dry and shaken on as loosely as possible, as the more loosely it lies the more air—the best non-conducting medium—it contains. If over the loose dry material some light covering, such as strong oiled calico, can be thrown, it will prevent cold winds from penetrating, and keep the hay or straw dry.

When it becomes necessary from severe and continuous frost to keep the glass covered up for a few weeks at a time, and when, perhaps, the thermometer inside the pit would indicate a few degrees of frost, great caution is necessary in uncovering and exposing the plants to light and air when the weather changes suddenly to a thaw. To uncover suddenly under such circumstances exposes them to such a sudden reaction as will prove far more destructive than a degree or two of frost. The covering should not be touched till the temperature inside has risen above freezing a few degrees, and then it should not be removed all at once, but by degrees. Plants are living things, possessing all the susceptibilities of the most perfect and delicate organism, and are as subject to injury from sudden and extreme changes of light and heat as is the human frame. Many never think of this, or if they do, are apt to forget it; and so, as soon as it thaws, off goes the covering, and the plants are injuriously affected even by the sudden flood of light, and if they have been slightly frozen they are ruptured by a too sudden thaw, and mould and rotteness follow. Frost should not be allowed to creep in if possible, but if it does it should be allowed to creep out, not be suddenly expelled.

The great points, therefore, in wintering plants where fire heat cannot be applied are—first, to keep the plants dry, and in as complete a state of rest as possible, all the latter part of autumn and winter. Secondly, when it becomes necessary to cover up for a length of time from severe frost, the covering material should be dry and loose. Thirdly, when thaw takes place do not uncover at once, but gradually, and not till the thaw is complete.

All winter watering should be avoided beyond what is necessary to preserve life, and it is much better to have plants at the drooping point than the least over-wet. This is equally applicable to plants wintered in spare rooms, and, indeed, even in greenhouses where fire heat can be used. It is astonishing how little water is sufficient in winter for flower-garden plants, and especially *Pelargoniums*, which are often ruined by late propagation and over-watering in winter. I have frequently had variegated *Pelargonium* cuttings in eight-inch pots on shelves go without water for eight and ten weeks, and look splendid, although so dry that some would think they would be starved.—D. THOMSON (in *Gardener*).

"EVERYBODY'S WEATHER GUIDE."

THIS is the title of a useful little pamphlet by Mr. Steinmetz. The following extracts will give some idea of its contents:—

"How long will this weather last?" is a common inquiry. The answer depends upon the wind which makes it, for every wind makes its weather. Well, there are only eight points at which the wind 'hangs,' or has a tendency to blow steadily for any lengthened period. The two most prevalent winds are S.S.W. and W.S.W., the former invariably bringing rain, the other generally accompanied by dry weather. Between W. and N.W. there is another point of duration, with fair weather; another between N. and E., as everybody knows,

especially in March and May with cold, dry, ' parching ' weather; another between E. and S.S.W. in summer when the season is rainy. We have, finally, N., W., and E. winds of some duration, the first and last cold and dry (excepting occasionally in winter), and the W. sometimes wet or 'blowy,' when it tends to back to the S.W. or veer to N.W. These make up the eight points of wind duration.

"In spite of the proverbial irregularity and inconstancy of the winds, it may be stated that there is a positive regularity in their succession. Each month has its characteristic wind, and consequent weather. Thus, January is characterised by winds between W. and N.; February, between S. and W.; March, between N. and E.; April, S.W., N.E.; May, N.E., S.W.; June, between W. and N.; after this the class between W. and N. prevails during the summer, and the class between S. and W. through the latter four months of the year.

"Bearing this result of the meteorological registers in mind, we obviously have a clue to the winds that may be expected in each month, together with their consequent weather.

"The wind which is to prevail during the summer most frequently sets in with the vernal equinox; therefore, that period should be observed; for, knowing the wind that is to prevail, we may infer the character of the summer—wet with south-westerly, and dry or average with north-easterly winds.

"According to Kirwan:—(1), When no storm occurs before or after the vernal equinox, the ensuing summer is generally dry, at least five times in six. (2), When an easterly storm happens on the 19th, 20th, or 21st of March, the ensuing summer is dry, four times in five. (3), When a storm occurs on the 25th, 26th, or 27th of March, and not before, in any point, the following summer is generally dry, five times in six. (4), If there be a storm from S.W. or W.S.W. on the 19th, 20th, or 22nd of March, the following summer is generally wet, five times in six.

"If the barometer rises after 9 or 10 A.M., fair weather may be expected for the day. If the barometer falls after 3 or 4 P.M., there is every probability of a wet evening.

"For the hours of regular observation, 9 A.M. and 9 P.M. should be selected.

"In winter, whenever the thermometer stands about 34° (which is neither quite freezing nor yet mild), by night, and when by day about 45° (which also is a medium between cold and mild), it is a sign of much rain at hand.

"In summer, when the thermometer rises gradually with the barometer, it is more certain that it will be fine weather than if the barometer only be rising.

"If in summer the thermometer stands low, with S. or S.W. wind, be sure of much wet; but if high with those winds, it will soon be clear sky and great heat.

"If the thermometer be unusually high during the night in summer, there must be thunderstorms raging somewhere in England at the time.

"If the thermometer be high during winter nights, be sure of high winds in a few hours."

NOTES AND GLEANINGS.

THE examination of young gardeners at the Royal Horticultural Society will commence on the 17th of December, and not on the 31st, as formerly announced.

—THE dry earth sewage system suggested by the Rev. Henry Moule, has been most successfully introduced in Hindostan, and the Indian Government have presented him with an honorarium of £500.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Asparagus, let all be cut down as soon as decaying, and the surface of the beds be dragged off with a rough rake or fork into the alleys. The beds may have a slight salting at once, and rotten manure may be wheeled on them and spread as soon as a good chance occurs. *Cauliflower*, pot and prick out sufficient plants immediately. *Endive*, all spare frames or pits should be put in requisition. If they have covered Melons or Cucumbers the haulm may be removed and strong plants of *Endive*, half blanched, may be planted with good balls of earth as close together as they can stand. Do not, however, water them in; if the soil is dry so much the better. *Kidney Beans*, make provision for protecting those in full bearing on frosty nights; their season may sometimes be prolonged for some weeks by averting a single night's frost. *Lettuce*, continue to secure plenty of the August-sown; an old frame or pit should be filled with the latest sowing. They may be pricked out as thickly as they can stand, choosing small and compact plants. Let autumn *Lettuce* be tied up to blanch as soon as ready, and a considerable quantity of *Endive* should be tied forthwith, in order to avoid any check to the heart

through early frosts. *Sorrel*, go over, and cut down all overgrown plants to provide young leaves for winter supply.

FRUIT GARDEN.

The general impression amongst practical men is, that autumn planting of fruit trees is superior to that in the spring. We are decidedly of this opinion, and we would advise those who intend making new orchards, removing large fruit trees, or replacing decayed young ones, to commence operations of a preparatory character immediately. Such preparation should consist, in the first place, of a necessary provision of fresh and sound loam; and if this can be obtained with some rough turf in it so much the better; if not, it will be well to mix rough stable litter, straw, small sticks, or any other coarse material with the loam, when filling into the holes. The loam being provided and thrown into a high and sharp ridge, in order to throw off the rains, the next work is to thoroughly drain the site intended for planting. Without this all subsequent operations will but end in disappointment. Thorough drainage being secured, stations may be formed for making a hard bottom of broken stone-rubble, broken bricks, or other hard material, with a coating of cinders on this hard surface to prevent the soil from entering the porous materials beneath. As to depth, we would advise great moderation, provided the kinds are in any way tender and designed for the dwarfing system. For such, 18 inches in depth of soil will be quite sufficient; and if the ground is of a moist character one-third of the volume of soil should rise above the ordinary ground level—indeed, in all cases it is well to raise it considerably. We would also advise that a trench be thrown out without delay around very large trees intended for removal. This will at once check late growth, and induce a disposition to emit fibres. Continue gathering Apples and Pears, most varieties of which will now be fit; at all events, the early occurrence of frost renders it inexpedient to leave them so long as might have been advisable under more favourable circumstances. Nonpareil Apples should be amongst the last gathered, and the same may be said of the *Glen Morgan* Pears. If *Coe's Golden Drop* Plums are carefully gathered, wrapped singly in thin paper after remaining some days in a dry, airy room, and then packed in shallow boxes, they will keep a long time, and so will the *Blue Impératrice* and the *Ickworth Impératrice*, the latter being the preferable one of the two.

FLOWER GARDEN.

As the nights now become cold, tall *Fuchsias*, *Scarlet Pelargoniums*, and other specimen plants planted out on lawns should be taken up, potted, and placed in the greenhouse for the winter. Shrubs overgrowing walks should now be cut back. Cuttings of Laurels and other shrubs may now be prepared and put thickly in nursery-beds in the reserve garden. Look over *Hyacinths*, *Tulips*, *Narcissus*, &c., and sort them preparatory to planting in the flower garden. For offsets a bed should be prepared in the reserve garden, using the best sandy loam and well-rotted cowdung or leaf mould; but the bulbs when planted must have a layer of pure soil on the surface to preserve them from canker, as manure is sure to accelerate the disease.

GREENHOUSE AND CONSERVATORY.

Much has to be done in plant-houses in the next fortnight. All pots should be washed clean, and all insects extirpated. Should any plants prove so foul that some time must elapse before they can be thoroughly cleaned, they had better be removed to the plant-hospital, or to some of the other houses, where they will be out of sight and can do no mischief. Everything must now be made thoroughly clean if success is to be obtained during the dull winter months. Above all, let the glass, both on the roof and at the sides, be washed; those who unfortunately have not enough assistance cannot accomplish this, but the difference in point of success between a dirty roof and a clean one will be found enormous, all other matters being equal. Let everything liable to suffer from frost be housed immediately; a single night's frost will render nugatory the labour of many months. The tall *Cacti* should by this time have completed their growth. It is a good plan to remove the terminal point from such as are still growing, and to diminish the supply of water—indeed, they will need very little, if any, between the end of October and January. Let them have abundance of light; this is of paramount importance when a good bloom is desired.

STOVE.

When the sun shines out clearly give air, to maintain the plants in a hardened and ripened state, and take care not to

increase the temperature with a moist atmosphere, or you will start the plants into growth, which at this season will be perfectly ruinous. The plants under such treatment must necessarily be constitutionally injured; the sap cannot at this season, for want of light, be properly elaborated, and, consequently, the shoots produced are weak and spongy, and are liable to damp off. The art of cultivating exotic plants lies more in studying the seasons of excitement and rest than is generally imagined. This rightly understood and acted upon, must necessarily of itself, and reasonably so, materially improve the general aspect of a collection not previously cultivated with due regard to this particular. The temperature for *Orchids* must, of course, decline with the decline of the year; as light is restricted, so also must be the heat. Continue to remove all plants having thoroughly ripened their growth to a cooler house with less atmospheric moisture. The *Cattleyas*, when rooting freely, will continue to produce buds from the base of the pseudo-bulbs if kept in constant excitement; this, although it increases the volume of the plant, robs the blossom. The *Aërides*, *Dendrobiums*, &c., will continue to enjoy a tolerable amount of both heat and moisture. Shading will not now, under any circumstances, be required. In the growing or warmest house let 80° by day and 70° by night be the maximum for a week or two; for the others at rest, 65° by day and 60° at night will be sufficient. Succulent roots are sure to perish, and it is by the preservation of these that gorgeous flowers can be expected to shoot forth with any degree of vigour.

PITS AND FRAMES.

Cuttings now rooted must be stored away for the winter, in order to make room for plants taken up from the flower garden.—W. KEANE.

DOINGS OF THE LAST WEEK.

Early Frost.—Notwithstanding many warnings, some of the most careful would be caught by the frost on Friday morning. Though the weather had been getting cold, and the wind came from due north, we did not expect at bedtime on Thursday that we should find ice the thickness of a penny-piece in shallow porous vessels, and the leaves of our bedding *Pelargoniums* too hard to bend on Friday morning. Owing to the bright sun being clouded at its rising, and more still to the dryness of the ground and the atmosphere, this sudden frost did less damage even in the flower garden than might have been expected. Even the *Perilla*, though hanging its head for a time, plucked up during the day, and the chief change perceptible was a deeper, somewhat sickly purple in the upper leaves. *Dallias* suffered in some places, and escaped entirely in others at a short distance off. In the kitchen garden the chief sufferers were *Vegetable Marrows*, which had a good portion of their foliage blackened; and whilst *Kidney Beans*, and even *Runners* grown on the ground suffered considerably, those of the latter growing and climbing on stakes escaped uninjured—a matter of importance as regulating kitchen supply. This rule did not always hold good, as in some cases what was closest to the ground suffered least, whilst the same subjects a little higher were touched to their injury. During the day, however, the flower-beds were at their brightest, all the brighter from being looked upon by nearly two hundred children. Measures were taken to place plants in pots under sheds or other protection, as they would suffer more than those planted out in the ground—a precaution necessary, though the wind was slightly more genial at night than in the morning, and bringing a much slighter frost on the Saturday morning than on the morning previous. Though cold on Saturday, the shifting of the wind towards the west gave us hopes that our fruit might (the later ones) hang a little longer, and the flower garden might remain gay for a fortnight hence at least.

We do not recollect of such a frost so early here, with so few premonitions of its approach, as, with the exception of the *Horse-Chestnut*, there is hardly a tree that has begun to change its foliage. From a fine-headed *Elm* in the pleasure grounds, all the leaves that have previously fallen might have been placed in a peck basket.

Children and School Parties.—Here what we remarked the other week as to village garden shows also applies. It is well not to have them too late, and especially if many of the children are young. The cold weather, though dry and sunny, damps the general joy, and the little ones become tired out, and are hardly able to appreciate the fine things in the way of cake, tea, and buns, provided for them. Such gatherings in rooms, however

adorned, are poor makeshifts for the open downs, the large field, or better still the lawns of a garden. It is pleasant to see, and delightful to contemplate, the associations between the young and the beautiful. We sometimes feel pleased that we were about the first to get large gardens opened to the public, without any attendance or supervision, leaving everything pretty much to the sense of right and honour of the visitors. We feel convinced now, that unless in extreme cases, children may be similarly trusted. Such trust leads early in life to the practice of looking and admiring, without the slightest desire to touch or handle, and without conjuring up the covetous anxieties to possess, which, whenever they intrude, destroy all the delights which the glorious sight of eye gives to every one who is endowed with a taste for the beautiful. There has been a vast change in this respect within a few years. It is quite right and necessary that those who have gardens should have places for privacy, retirement, and solitary meditation; but with all this the principle has been growing, that the possession of the beautiful loses more than half its charms if numbers of our brethren and sisters cannot see and admire as well as we. Even in the suburbs of our town, we feel glad to see the neat rail and not the dead wall as the boundary, so that the passer-by may have eye and nostril refreshed by the sight of the miniature lawn, and even the one bed of flowers. We feel thankful to the owner of every window who adorns that window with flowers, as thousands besides the possessor are delighted with the sight. Just as flowers and plants will not flourish in a house when kept at a distance from the light and air of the window, so we may rest assured that a wasting and withering away of our better nature and feelings will take place if ever we try selfishly to stand alone without the life-giving air and light of sympathy with and from our kind. The man or woman who would know elevated happiness, must unselfishly be engaged in at least trying to make others happy.

KITCHEN GARDEN.

Chiefly a repetition of previous weeks' work and notices. Provided litter to throw over some old sashes now covering a fine bed of Dwarf Kidney Beans just in fine gathering, or rather fit for it. Earthed up more Celery, and if we have enough of long litter will use that somewhat liberally at the top instead of earth, as then there is less risk of damping, or of frost entering. Again planted out Cabbages, and had the ground well trenched for more, putting in the bottom of the trench decayed short grass, which will become sweet enough long before the roots reach it, and even then give up its buried nitrogenised properties. Hoed among young crops of Cabbages, Spinach, and Lettuces. Prepared for planting the latter under protection. Planted out Cauliflowers for hand-lights, will also pot a number, and keep them in the cold orchard-house in winter. Removed haulm of Peas that would do no more good, as it always gives the garden a miserable appearance, and did what we could in the dry fine days to run the hoe through every part where it could find its way, so as to cut up and dry up all weeds before winter, as this has been a wonderful season for weeds growing. Now is a good time to place Lettuces and Cauliflowers under glass, where it can be spared for such a purpose.

FRUIT GARDEN.

Attending to necessary routine. Gathered fruit in fine days, and much against our will gathered fine fruit of Peaches from the orchard-house, hoping they will keep a few days longer with us than on the trees. Did what pruning we could as detailed in previous weeks' notices; weeded and cleaned all Strawberry plants in pots, and unless the weather continue open and warm will now give no more water than will keep the leaves from flagging.

ORNAMENTAL DEPARTMENT.

As already stated, the flower garden is still in its beauty, and never gave less trouble than this season, whilst on the other hand the lawns never gave more trouble to keep them clean, short, and smooth. We have touched nothing in the beds as yet, and hope now we shall not require to do so for a fortnight.

Tulips planted will need to be defended from heavy rains. All bulbs intended for forcing cannot be potted too soon, and we forbear observations, previously plentifully made, as to mode, treatment, &c. Auriculas should be defended now from heavy rains. The best position is a *frame* with glass over it, but plenty of air back and front. Pinks, Carnations, Wall-flowers, shrubs, &c., intended for forcing, should have their pots plunged, or, better still, be set on a hard surface and then be banked up with earth, leaf mould, ashes, or litter. The roots are often much injured in pots when we little think of it.

Cuttings had to be thought about, and litter, mats, &c., put in readiness to protect those under little protection if the frost should come severe. The sooner all hardwooded plants in pots, and softwooded ones are under protection, the better it will be for them. Many, like ourselves, may not be able to put them all in their winter quarters, but sheds and other contrivances must be resorted to, so that they may have light and air, and be protected from frosts and heavy rains until we have the plant-houses ready for them. As the season advances much watering will not now be needed, and it is advisable to give it in the mornings about nine or ten o'clock, so that the moisture may be absorbed or parted with before night. Even Chrysanthemums though comparatively hardy should be taken under protection, so that a severe frost may not injure them. A little litter, dry and free from dung, better still some rough hay saved from the roughest-kept parts of the pleasure grounds, will now be most valuable for many purposes.—R. F.

COVENT GARDEN MARKET.—OCTOBER 9.

MODERATE supplies, both of foreign and home-grown fruit, have come in this week, and prices continue about the same. Vegetables are good and plentiful. Pears consist of Marie Louise, Gansel's Bergamot, and Duchesse d'Angoulême; Apples of Ribston Pippin, Cox's Orange Pippin, Court of Wick, and others of less note.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	1	0	1	6	Melons..... each	1	6	to 3	0
Apricots doz	0	0	0	0	Nectarines..... doz.	0	0	0	0
Cherries lb.	0	0	0	0	Oranges 100	8	0	14	0
Chestnuts bush.	0	0	0	0	Peaches doz.	4	0	10	0
Currants..... ½ sieve	3	6	5	0	Pears (dessert) .. doz.	2	0	3	0
Black doz.	0	0	0	0	Pine Apples lb.	4	0	0	0
Figs doz.	0	0	0	0	Plums ½ sieve	2	6	5	0
Filberts..... lb.	1	0	0	0	Quinces doz.	0	0	0	0
Coba lb.	1	0	0	0	Raspberries..... lb.	9	0	0	0
Gooseberries .. quart	0	0	0	0	Strawberries..... lb.	0	0	0	0
Grapes, Hothouse.. lb.	1	6	4	0	Walnuts..... bush.	10	0	20	0
Lemons..... 100	8	0	12	0	do. per 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes..... each	0	3	to 0	6	Leeks bunch	0	3	to 0	0
Asparagus ... bundle	0	0	0	0	Lettuce per score	1	0	1	6
Beans, Kidney, ½ sieve	2	0	3	6	Mushrooms ... pottle	2	0	3	0
Scarlet Run, ½ sieve	2	0	3	0	Must.& Cress, punnet	0	2	0	0
Beet, Red..... doz.	2	0	3	0	Onions..... per doz. behs.	5	0	0	0
Broccoli bundle	0	6	1	6	Parsley..... per sieve	3	0	0	0
Brus. Sprouts ½ sieve	2	0	2	6	Parsnips doz.	0	9	1	6
Cabbage doz.	1	0	1	6	Peas..... per quart	0	0	0	0
Capsicums..... 100	2	0	3	0	Potatoes..... bushel	2	0	3	0
Carrots..... bunch	0	6	0	8	Kidney do.	3	0	4	0
Cauliflower..... doz.	2	0	4	0	Radishes doz. bunches	0	9	1	0
Celery bundle	1	0	2	0	Rhubarb bundle	0	0	0	0
Cucumbers..... each	4	0	0	8	Savoys doz.	0	0	0	9
pickling doz.	2	0	0	0	Sea-kale basket	0	0	0	0
Endive doz.	1	0	0	0	Shallots lb.	0	8	0	0
Fennel bunch	0	3	0	0	Spinach bushel	2	0	3	0
Garlic lb.	0	8	1	0	Tomatoes..... per doz.	2	0	3	0
Herbs bunch	0	3	0	0	Turnips bunch	0	6	0	0
Horseradish .. bundle	2	6	4	0	Vegetable Marrows, dz.	1	0	2	0

TRADE CATALOGUES RECEIVED.

T. S. Ware, Hale Farm Nurseries, Tottenham, London, N.—*Catalogue of Ornamental Trees, Shrubs, Roses, Fruit Trees, Herbaceous Plants, &c.*

F. K. Phoenix, Bloomington Nursery, McLean County, Illinois.—*Wholesale Price-List of Fruit and Ornamental Trees and Shrubs, &c.*

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

BROAD BEAN (J. B.).—The specimen sent is the best of the Long-pods, and is called Johnson's Wonderful.

FRUIT TREES ON WOODEN PALINGS (*Inquirer*).—As your soil is on the gravel, we should think Morello Cherries would do as well as anything. The best fruit of that kind we ever saw were grown on a soil very full of stones, at the same time it was deep and healthy for some distance down. Plums might also be tried, or the intervals between large trees might be planted with Red Currants, which, if against the north side, may be matted up and kept longer than when grown in the open quarters. If you merely wanted the fence covered with climbers, there are plenty of plants available for the purpose, such as *Ceanothus*, *Cotonasters*, and *Dankianus* Roses, all of which will do well in your dry, gravelly soil.

LOCAL HORTICULTURAL SHOWS (*S. Abbott*).—There are between four and five hundred local societies, many holding more than one show annually. If we reported one of the smaller exhibitions we must report all, and no one is interested in them except the prize-takers.

VINE-PRUNING (*A Subscriber, V.*).—To give "full instructions for pruning and dressing" the vine would occupy a small volume. We have published such a volume, entitled "The Vine Manual," and you can have it free by post from our office if you send your address, together with thirty-two postage stamps.

ALLOWANCE OF VEGETABLES (*W. D. Paine*).—"A gardener allowed vegetables in addition to his wages." The above agreement, without any special stipulation either way, would, if construed strictly, include Potatoes, the family supply for the winter being grown in the garden under the gardener's care; but if a plot only sufficient for producing the family supply is grown, the gardener would not be wise or just to insist upon taking any of that supply. The Double-blossomed Peach may be budded upon the same stocks as are used for the single-blossomed.

FRUIT TREES IN ORCHARD-HOUSE (*C. P.*).—We consider it is of little importance whether the surface-soil of the pots is removed or allowed to remain, provided they have the proper top-dressing and after-culture. Spirits of wine employed to destroy scale will not injure the buds of the trees.

BUDDING ROSES.—"Will 'AMATEUR,' who writes in Vol. XI, page 3, on 'Budding Roses,' say how much of the Briar stem he leaves on below the 'bud' before he plants it, as of course, there can be no 'heel' to the cutting? Does he graft on Briar branches of the same year? And when does he strike them, supposing they are grafted in July and August?—CHATEAU VALLON."

POLYSTICHUM LONGITIS.—"I cannot let 'F. LIX-FEMINA' continue writing about *P. lonchitis* proliferum without joining in. I have a plant of the same variety, which, curiously enough, came from a garden at Leamington, in Warwickshire, many years ago. It was in my early Fern days, and I had a strong inclination for moving my plants, which at last caused my poor Fern to grow less, and take sick; and I had to remove it to the hospital, where it has a quiet life and a warmer climate, and is looking healthy again, but not vigorous enough to throw off the young plants it used in former days. It has one tiny little plant by its side now, which I shall treasure much. If 'F. LIX-FEMINA' has more than one to dispose of now I should much like it, as I promised one to a friend. I should be delighted if 'J. E. M.' would allow me the privilege he offered to 'F. LIX-FEMINA' of telling how he produces young Ferns without sowing seed; and also if he would let me have *Polystichum lineare* proliferum, which he mentioned. I would gladly exchange any Ferns I have to spare for new varieties of any kind, as I am anxious to make my British collection as perfect as possible. It is now a very good one.—CAT."

SPIDER (*L. B.*).—The spider found in the orchard with a body something like a Cherry stone in size and shape, of a bright orange colour with a dark brown spot on the body, dark underneath, and with legs striped red and white, is one of those which make the beautiful geometrical webs in the autumn. *Epeira scolaria*. Figures of both sexes are given in Mr. Blackwall's fine work published by the Ray Society.—W.

WILLOW PATTERN (*J. O. G.*).—Various fictions have been invented to weave the picture into a connected narrative, all too long and too foreign for our columns.

ROSES FOR TRELLIS (*The Cedars*).—We would advise you to cover the trellis against the southern aspect of your house with Tea-scented and Noisette Roses. In addition to *Gloire de Dijon*, and *Climbing Devonensis*, which we would not remove on any account, we would have *Maréchal Niel*, Tea-scented; *Celine Forestier*, *Ophir*, and *Lamarque*, Noisette Roses. To suit your requirements, as Hybrid Perpetuals, we may name *Docteur Ruchprier*, *Duchesse de Cambridge*, *Jules Margottin*, *Jacques Lafitte*, *Madame Hector Jacquin*, and *Red Rover*. We should prefer all on the Manetti stock. The following will suit you for the wall, in addition to the six last named:—*Bourbons*:—*Earonne de Noirmont*, *Vivid*, and *Sir Joseph Paxton*. Hybrid Perpetuals:—*Souvenir de la Reine d'Angleterre*, *Prince of Wales*, and *Louis Bonaparte*.

HARDINESS OF LYCOPODIUM DENTICULATUM (*J. C.*).—The fragment sent us is from a plant of *Selaginella* (*Lycopodium*) *denticulata*. It is hardy in sheltered situations in most mild localities. We are not surprised to hear of its proving hardy in Leinster considering the mildness of the winters in Ireland.

BORDER FOR PEACH TREES (*A. E. C. D.*).—The best soil for a Peach-border is a strong unctuous loam; and turf from a pasture, cut 3 or 4 inches thick, is to be preferred. Good drainage is essential in fruit culture, and a layer of brickbats and old mortar, 9 inches thick, at the bottom of the border is to be recommended. The depth of soil in the border should be from 20 inches to 2 feet.

SIX ANNUALS FOR EXHIBITION (*Tweedside*).—You do not say whether you wish them to be hardy, half-hardy, or tender. We, therefore, name six or eight of each. *Hardy*.—*Whitlavia grandiflora*, *Viscaria splendens*, *Cenothera bistorta* Veitchii, *Nemophila insignis* marginata, *Lupinus hybridus* Dunnettii, *Linum grandiflorum* rubrum, *Centranthus macrophyllon*, and *Pectis grandiflora*. *Half-hardy*.—*Clintonia pulchella* azurea grandiflora, *Alonsoa Warscewiczii* compacta, *Martynia fragrans*, *Rhodanthe maculata*, *Schizanthus Grahani*, *Salpiglossis sulphurea* splendens, *Phlox Drummondii* Radowitzi, and *Acerolinum roseum*. *Tender*.—*Cockscombs*, *Celosia pyramidalis* coccinea, *C. argentea*, *Mimosa pudica*, *Thunbergia alata*, *T. alata* alba, *Gomphrena globosa* aurantiaca, and *G. globosa* striata.

THIRTEEN GOOD GLADIOLI (*Idem*).—*Oracle*, *Calypto*, *Rebecca*, *Velleda*, *Adèle Souchet*, *Reine Victoria*, *Raphael*, *Stephenson*, *Rembrandt*, *Othello*, *Dr. Andry*, *James Veitch*, and *Impératrice Eugénie*.

ORCHARD-HOUSES (*X. Y. Z.*).—Pearson on "The Orchard-House" will suit you. It can be had free by post from our office if you enclose twenty postage stamps with your address.

DIANTHUSES AND MULE PINKS (*Lady Amateur*).—Most of the *Dianthus* will flower in the year in which their seeds are sown, if this is done early in March and a hotbed is afforded. Mule Pinks do not flower in the same year. Good *Dianthus* for a border to a Rose-bed are the double *Dianthus sinensis* laciniatus and *D. sinensis* rubro-striatus.

VIOLA CORNUTA (*Idem*).—The stock you now obtain by dividing the old plants will make a fine display next year, blooming throughout the season, and the seed you sow in spring in the open air will make good plants by autumn, but they will not bloom until late. Cuttings and divisions are better. *Viola cornuta* in a bed needs no edging, but you may have an edging of *Oxalis tropaeoloides*, or *Cerastium tomentosum*.

GOLDEN BALM PROPAGATION (*Idem*).—The easiest and best plan is to take up a few old plants and winter them in a cold pit or cool greenhouse. They will give an abundance of cuttings in spring, and these if inserted in a hotbed will make fine plants in a short time.

VERBENA VENOSA (*Idem*).—Cuttings of *Verbena venosa* strike most readily. It is easily wintered in a house from which frost is excluded, and cuttings taken off in spring, as with other Verbenas, make good plants for flowering the same year. We would put in a stock of cuttings now in a hotbed, or take up a few of the smallest of the old plants, place them in heat for a short time, and winter them in a cool airy house. Whether you strike cuttings or winter old plants, you will obtain a good supply of cuttings in spring. Seed sown in a hotbed early in March will give plants that flower by July and onward. It is a good plant, but some improved varieties have been obtained by crossing with *Verbena Maconetti*.

SHRUBBY CALCCEOLARIAS FROM SEED (*Idem*).—To have them flower finely, seed should be sown in August and the plants be potted off before autumn and wintered in a cool greenhouse on a shelf near the glass. They will, however, flower the same year, if seed be sown in a hotbed in spring, and the plants be grown on, hardened off, and planted out in June. They flower in autumn.

CALCEOLARIAS AND VERBENAS CEASING BLOOMING (*New Forest*).—We should attribute the short duration of the blooming of the *Calcceolarias* and *Verbenas* to the dryness of the ground. Had you given the soil a few good soakings of water during the late dry weather, we think they would have continued to bloom until frost.

SIBTHIAN LARKSPUR CULTURE (*P. J. N.*).—We think your double *Delphinium grandiflorum* would succeed if you were to plant it with the crown slightly elevated above the surrounding ground-level, and to mulch around it with some half-decayed leaf mould. It is the continual variations of our climate that render plants of this kind difficult to winter. Look well after snails and slugs which eat the crowns.

LOBELIA CARDINALIS CULTURE (*Idem*).—Strew soot over the crowns, and cover with some half-decayed leaves, or take up the plants and winter in a cold frame. It thrives in a good, rich, moist, well-drained soil, with an abundant supply of water in summer, but requires a dry soil in winter.

WOODlice IN MUSHROOM-BEDS (*J. Gardener*).—We do not know of anything put on a Mushroom-bed that will drive woodlice away or destroy them. Try a boiled Potato wrapped in a little hay and placed at the bottom of a small flower-pot. A number of these traps laid on their sides on the bed at night, near the haunts of the woodlice, will catch a large number. Examine the traps every morning, and destroy the woodlice.

THRIPS AND SCALE IN FERN-CASE (*C. J. J.*).—Your best means of destroying the thrips is to afford the plants all the ventilation you can so as to get the fronds dry (and a few hours will be sufficient for this purpose, for a dry atmosphere is not good for the plants), and then, closing the case, fill it with tobacco smoke, so full that a plant cannot be seen through the glass. The fronds will not be discoloured or injured if they are dry and the smoke is cool. Repeat the fumigation the next night but one, and twice a week for a month. The scale you may overcome by picking it off with the point of a knife whilst it is soft, but if brown and hard take it off with the hand and put it in the fire. This is a rather troublesome mode of destroying scale, but a certain one. You may wash the stems of the fronds with a piece of sponge dipped in a solution of Gishurst compound, at the rate of 4 ozs. to the gallon of soft water. The scale, however, is best removed from the stems and midribs of the fronds with the point of a knife. Soft soap and Gishurst applied to the fronds will turn them black and injure them.

MOVEABLE HOUSE FOR HALF-HARDY FERNS (*K. M. H.*).—You could very easily have a house constructed of the size you name, and that would be moveable at will with very little trouble. You might have it in six pieces—viz., two sides of roof, two sides, one end, and a door. We would have the sides 6 feet high and 7 feet long. A piece of timber along the bottom, and another 3 feet from the ground, with end pieces 6 feet long morticed to the timber at bottom, and the side pieces at 3 feet from the ground, would give you a frame 3 feet by 7 feet, which you could cover with three-quarter-inch tongued-and-grooved boarding, having the boards fixed vertically. Upon the two end pieces a top plate might be fixed, and you could fill in between the end pieces with sash-bars, morticing them into the top and middle plate of wood, and you have the sides. The middle rail should have the sash-bars let in flush with the boarding, and the boarding not coming to within half an inch of the top of the plate will form a rebate for the glass. The top plate and end pieces must have a rebate put on to receive the glass. The end may be formed in a similar manner, provision being made for a three-feet doorway in the centre. The top lights may also be in two lights, one for each side, and the whole may be put together with screws. We think from sides too expensive and heavy. The door will be sufficient ventilation. You could heat the house efficiently with one of Riddell's small boiler-stoves inside.

ROSES LOSING THEIR LEAVES (*Subscriber*).—We think your plants were injured by the severity of last winter's frost, and though they have bloomed, their tissues were probably damaged by the frost, and their blooming has been too great an effort in their enfeebled condition. We have some affected in a similar manner, but we have hopes of their ultimately recovering. We shall prune them in closely in November, and see what their appearance is in February. If the wood still keep fresh and the eyes are good, we shall give them another chance, but if not promising we shall be in time to replace them.

PELAGONIUM PRETTY POLLY (R. H. P.).—Your sport of Pretty Polly is curious, but as regards the flower useless for an effective bedding plant; it has neither form, colour, nor truss to recommend it. The Floral Committee of the Royal Horticultural Society have established rules for their judgment, which we believe the public rarely find to be wrong.

PEAR TREE LEAVES EATEN (A Subscriber).—Your Pear tree leaves are eaten and inspected together by the larvae or caterpillars of some moth or fly, which you will discover upon a close examination of the leaves. The only remedy is to pick them off with the hand and destroy them.

CLIMBING ROSES (Idem). Three of the best climbing Roses are—Dunode Rambler, Ruga, and Wells's White, or Madame d'Arblay.

TURF FOR VINE BORDER (E. S. C.).—The turf you have laid up for nine months, which is now full of worms, may be turned over, mixing with it a cartload of old mortar rubbish from an old building, and half the quantity each of half-inch bones and charcoal to every ton of the turf. This will not, perhaps, kill the worms, but enrich the soil, and as for the worms they will not do any harm. A sprinkling of fresh lime will destroy them, and so will soot sprinkled over the turf as it is being turned over.

ASPARAGUS-BED MAKING (T. P.).—It is essential in your heavy, stiff soil that the ground be well and deeply drained. Instead of excavating 2 feet, go a foot deeper. Burning the clay is good, but do not place it when burned at the bottom; put there a layer of stones and brick-bats, and upon these the rougher parts of the burnt clay, using the finer to mix with the other materials, which we must employ as follows:—Take of horse-dung, ashes, and the burnt clay equal parts, and add to them their bulk of turf and good soil; the more turf the better. If you have it, add sand equal in quantity to the dung. Mix all well together, proceeding until you have enough for the bed, then raise it 1 foot above the level of the surrounding ground, and let the whole remain throughout the winter, planting in March. We are not able to say how far the roots of Asparagus penetrate into the ground, but we have found them at 6 feet from the surface in sandy soil.

SEA-KALE PLANTS FOR EARLY FORCING (T.).—We are not able to say how the London gardeners succeed in getting plants for forcing to furnish Sea-kale in November; but we have it ourselves at that season by taking up some of those plants that have perfected their growth, pulling off their leaves now, and removing them at the close of this month into a forcing-house. We have Sea-kale in a fortnight or three weeks after introducing the roots. Any of the principal nurserymen can supply you with strong plants for forcing if you describe to them what you require.

GRASS LAND COVERED WITH MOSS (Eresham).—The ground you have harrowed, and from which you have taken off a quantity of moss, should now have a top-dressing of rich compost, 1 ton of lime being mixed with every six of the compost. The lime should be thrown up with the compost in a fresh, unslacked state. When the lime has become slacked the compost should be turned over and mixed, and may then be put upon the ground. Three tons of lime per acre are a good dressing. We are not prepared to say that this will effect a cure, but it will help, and given alternately with manuring, will reduce the moss to a minimum. The ground is poor. Soot, because it encourages the growth of the grass, will also destroy moss. It should be applied during showery weather in spring, and at the rate of sixteen bushels per acre.

ROOTS OF CUCUMBERS (E. Abbott).—The roots of the Cucumber sent are knotted with large masses of seemingly cellular tissue, and, as you state, having some resemblance to the club in Broccoli, only the knots extend and appear at short intervals along the roots of the Cucumber. We have noticed the same deformity several times, and attributed it to three causes—too much heat at the roots, too much dryness at a little distance from the surface, and too much richness and sourness of the soil. The most effectual remedy we found was poor, light, sandy, fibrous loam, and strength given by surface-dressings and manure waterings. When the evil becomes so bad and general as with your plants, it is quite as destructive as having fungus in the soil. We are apt to have many evils from our over-rich feeding of more things than the Cucumber.

BEDDING PELAGONIUMS (A. O. W.).—Thanks; we shall be much obliged by your sending your notes. Your communication, just received, shall be published next Thursday.

MANURING ROSES (W. H. M.).—Much depends on the quality and condition of the ground. From 3 to 4 cwt. per acre of guano, from 4 to 6 cwt. of superphosphate per acre, are good proportions. I never measure, but put the two mixed according to circumstances, more or less thickly. In winter 'W. H. M.' may put guano on as thickly as he likes; in growing time he must be cautious, as it may burn the rootlets. By the cow-dungure I mean droppings fresh from the cow. It may also be mixed with soil and turned in the heap, and then used.—W. F. RADCLIFFE.

WHITE ROSES (Geraldine).—Madame Rivers, Madame Vidot, Madame Freeman, Baronne de Maynard, Madame Alfred de Rouen, &c. These are all fine Hybrid Perpetuals, and hardy. The first two are to be preferred if the soil is suitable. We cannot depart from our rule of not recommending dealers, but any of the nurserymen who advertise in our columns could supply them.

BEDDING PELAGONIUMS (C. J.). For a rich deep soil, rather shaded, we would advise you to try Little David, a miniature of Tom Thumb, or Shrubland Pet, an Oak-leaved kind, with small pinkish flowers. In either case use pots, and raise the pots at times to prevent rooting out freely.

TRINIDAD PLANTS (R. H.).—We know of no Trinidad plants worth the expense of importing, for all worth cultivating are already to be obtained of our dealers and nurserymen.

VARIETATED LAUREL (F. Neill).—It is very striking. Send some of the leaves to the Floral Committee of the Royal Horticultural Society.

BLUE AND YELLOW MATERIALS FOR WINTER GARDENS.—Mrs. R. E. wishes to be informed where she can purchase such materials. Would not the broken tiles of encaustic pavement be applicable?

FRUIT COMMITTEE OF THE ROYAL HORTICULTURAL SOCIETY (M. A.).—Money prizes are given for some fruits.

A SMALL LEAN-TO HOUSE (Fred.).—First, as to the heating. A small iron stove will be quite sufficient to keep the frost out of a lean-to house 13 feet by 8. To make a small bed in that to strike cuttings in, the simplest plan would be to have fixed on the top of the stove an iron

vessel that would hold a gallon of water, or at least three quarts, and from that take two pipes into a table-box, made of wood, and if that is 4 or 6 inches deep it will give you plunging material for your cuttings, and on that table you can set hand-lights over your cuttings, or have little frames made on purpose, say 29 inches wide, 7 inches deep at back, and 3½ inches in front. If these are glazed with one square, and so that you can turn the glass bottom upwards, all the better. To heat with gas you can do this much more easily, as the gas can enter the house much lower than you can well have a fire-place. The simplest plan for heating the house and also your propagating-bed, would be as follows:—Have a tin vessel in the shape of an upright tea-kettle or coffee-pot, that will hold three quarts, with a concave bottom, and a ring gas-burner to play beneath it. Have another tin vessel, some 4 inches wider than the kettle or boiler, to place over it, to keep the heat about it and prevent the gas passing into the house. In this outer covering you will want two small pipes, from one-eighth to a quarter of an inch in diameter, one close to the bottom and communicating with the external air to give free burning to the gas, the other near the top of the chamber and going outside the roof to take off the products of the gas combustion. So far for the heat. To diffuse it, let a one-inch lead pipe be fixed to the top, and another to reach the bottom of the boiler, passing it also through the tin wall of the small enclosed gas-chamber. These pipes may extend for a couple of feet, or double that space, and where most convenient should have a branch pipe added. The first pipe may be fixed to two or three inch iron pipes and go round the house. Connected with the bottom pipe at the farther end, the branch pipe may go into a bed or table-box as spoken of. The simplest plan of all would be to make your table-bed, the bottom of it, as a sort of boiler, and take a gas-pipe several times through it before allowing it to rise through the roof into the open air. For greater simplicity, however, if this house is close to the kitchen of the dwelling-house, we would heat by a small iron stove, with a vessel of water on the top, and we would make our little propagating box like a little table, only what would be wooden drawers we would form with tin, zinc, or lead, covered below with wood, and covered on the top with zinc or plate iron, and this supplied with a funnel-opening and a tap to let off the cold water. About a gallon or more of water near boiling-point from the kitchen would give heat enough in general for twenty-four hours, and a little trouble would enable you to regulate the bottom temperature to a nicety. Your house will grow two Vines well, and we would recommend the Black Hamburgh and the Royal Muscadine. From what you say, you mean to plant outside. Whatever of the stem is exposed should have a three-sided wooden box, with a sloping lid to it, placed against it, so as to secure it from wet and frost. Many soils will grow the Vine without any preparation. If you make a border, one about 8 or 9 feet wide for such a house, and the following matters will be worthy of consideration:—1. The border should be well drained, especially in front. 2. The more the bulk of the border is above the level of the surrounding soil the better. 3. If the bottom is clay or sand it will be well to concrete it. 4. On that place 8 or 9 inches of rough rubble. 5. On that place sods reversed, and then from 20 to 24 inches of soil as fibrous and fresh as you can obtain it; and for manure add some ten bushels of broken bones. If all this is to do, defer the planting until April. Any more definite particulars we shall be glad to supply. For heating by gas see woodcuts and explanations in our present number; and for 'Vine Culture' see 'Vine Manual,' which you can have free by post from our office if you enclose thirty-two postage stamps with your address.

ESCHOLATA GRAPE (Memor beneficium).—The name is spelt as we now print it. This Grape was brought out, about thirty years since, by Mr. Money, a nurseryman, then in the New Road. Its bunches are large, and we have no doubt he named it as if a counterpart of the Grape of the Valley of Eschol commemorated in the Old Testament.

CAROL FLOWER (T. P. T.).—We have no doubt that the plant will require protection, and ought now to be in a greenhouse. We are obliged by the offer of the Lizard Orchis, but we should prefer having one sent when in bloom by carrier to our office, as we need it for drawing from.

NAMES OF FRUITS (Mrs. Young).—1, Gadchoben; 2, 28, 41, Josephino de Malines; 4, Ne Plus Meuris; 6, 10, 21, 31, 43, Mario Louise; 8, Passe Colmar; 11, 13, 23, Wioter Nels; 12, Williams's Bon Chretien; 14, Beurre Die; 15, White Doyenne; 16, Autumn Colmar; 17, Uvedale's St. Germain; 19, 27, Easter Beurre; 20, 26, Beurre Bosc; 22, Red Doyenne; 25, Seckle; 30, Old Colmar; 32, Fondante de Meester; 33, Henri IV; 34, Crasanne d'Hiver; 35, Colmar; 36, Rezi de Caissou; 37, 38, Figue de Naples; 39, Chantamel; 42, Beurre de Rance; 44, Beurre Chalkier. Despite our repeated request not to send many specimens, you sent no less than two score and four! The trees must be in bad condition, for every specimen is inferior. An annual surface-manuring would, probably, be beneficial. (Col. Lamer).—Apples: 1, Scarlet Nonpareil; 2, Cobham; 3, Blenheim Pippin. Pears: 1, Conceller de la Cour; 2, Grosso Chalcasso; 3, Beurre Langlier. (Arcadia).—Pears: 2, Fondante d'Autonne; 4, Williams's Bon Chretien; 6, Duchesse d'Angouleme; 7, Conceller de la Cour; 8, Figue de Naples; 9, Uranie. (H. L.).—1, Summer France; 2, Bloodgood; 3, Fullwood; 4, Lady's Delight; 5, Miller's Glory. (John Scott).—1, Fondante d'Autonne; 2, Bergamotte Cadette; 4, This is not a named variety, unless it be in some of the perry districts. (J. W.).—The Apple is Kerry Pippin, and the Pear Passe Colmar. (R. M. McC.).—Your Apple is Sack-and-Sugar. (A. F. London).—1, Lamb Abbey Pearmain; 2, Biggs's Nonesuch; 3, Emperor Alexander. (G. G.).—1, Kentish Filbasket; 2, Selwood's Reinette; 3, Golden Pearmain; 5, Hawthorn; 6, Keswick Codling; 7, Golden Pippin; 8, Calville Blanche; 9, Frankland's Golden Pippin; 11, Orléans; 12, Braddick's Nonpareil; 13, Lamb Abbey Pearmain; 14, Christie's Pippin; 15, Ribston Pippin; 17, Fern's Pippin; 18, Beauty of Kent, very small; 19, Grange's Pearmain; 20, Fall Pippin; 21, Boston Russet; 24, Manks Codlin; 26, Broad-eyed-Pippin; 28, Nonpareil; 29, Syke House Russet; 30, Scarlet Nonpareil. (H. P.).—The long Pear is Beurre Bosc, and No. 1 is Fondante des Bois. (R. H. A.). The Grape is Golden Hamburgh. We cannot make out the Apples or the Pear. There are many seedlings in your district which have no recognised names.

NAMES OF PLANTS (A. F. G. Birmingham).—One of the many monstrous forms cultivated of *Athyrium Filix-femina*. (L. S. D.).—*Allizzia* (Acacia) formosissima, common creeperhouse shrub. Plants may be obtained for half-lorphantha, piece. (J. McKenzie).—1, *Rubraekia fulgida*; 2, *Bidens leucantha*; 3, *Sapota officinalis*. (Rosebud).—The white flower, *Amaryllis candida*; the yellow flower, *Amaryllis lutea*. (C. H. R.).—1, *Chelidonium thirta*; 2, *Pteris serrulata*; 3, *Asplenium filicoides*; 4, *Polystichum angulare*, var. (S. A. M.).—*Torreya taxifolia*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending October 8th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . . 2	30.070	29.980	59	30	56	56	S.W.	.00	Overcast; cloudy and boisterous; clear and frosty.
Thurs. . 3	29.942	29.914	57	31	55	55	N.W.	.00	Fine; fine with white clouds; clear at night.
Fri. . . 4	30.068	29.097	52	25	55	55	N.	.00	Fine, but cold and dry; overcast at night.
Sat. . . 5	30.044	29.978	54	24	53	54	N.	.00	Clear, quite cloudless; fine; clear and frosty.
Sun. . . 6	29.932	29.828	51	37	52	53	N.W.	.15	Foggy; rain; overcast at night.
Mon. . . 7	29.612	29.512	60	31	52	52	W	.04	Rain; showers; clear and frosty; overcast.
Tues. . 8	29.675	29.509	57	24	52	52	N.W.	.01	Clear; masses of white clouds; clear and frosty.
Mean	29.910	29.688	55.71	28.86	53.57	53.86	..	0.20	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

FRENCH BREEDS OF FOWLS.

So many are writing of the above, and speaking of breeds that have been known for the last thirty years as novelties, that we wish to have our say on the subject, and to put those right who trust implicitly to our columns for their guide in poultry matters.

We will class them in three divisions—those who breed for profit, those who breed for exhibition, and those who breed for the love of the pursuit. We do not support manias, but we are anxious to give all encouragement and development to anything that may seem useful or profitable, and to communicate to our readers the results of our own experience. Constant straining after novelty is not the method to insure success, nor is it the road to profit, and we will not, therefore, touch on the Bredas and other novelties now. We will from time to time pass all in review, British and foreign, with a sole view to give to those who lack time or opportunity the benefit of our experience.

Profit properly understood means eggs or table poultry sold in the market. In all speculations of the kind the cost of producing should be taken into account; and here we must say a word about non-sitters. We are not sure they lay eggs enough to pay for those that take their places while hatching and rearing are the order of the day. These processes with our ordinary breeds are the recesses, the times when Nature rests. After three weeks of incubation and seven or eight of nursing, the exhaustion of the laying season is repaired, and the hen recommences the production of eggs, which is continued till all the energies of the bird are wanted for moulting; but where non-sitters are kept, broody hens must be bought, and kept to hatch eggs and to rear chickens. It is a question, then, whether the non-sitters are as profitable as egg-producers as they are supposed to be, and whether the surplus eggs they lay compensate for the expense they cause by rendering it necessary to provide substitutes for the performance of maternal duties.

We do not wish to underrate or undervalue the non-sitters. They are very desirable for those who have neither the desire nor the opportunity to rear chickens. Nothing is more vexatious to the amateur who has but scanty accommodation, and can keep but six or eight hens, than to find them, when he visits the house in the morning, huddled in corners, forming a ball of their feathers, from the centre of which their head projects, clinging firmly to one egg, or to some large stones, and growling terribly when they are forcibly removed. This is avoided by having non-sitters. But as a class these amateurs are not those who keep poultry for a profit. We know a considerable profit may be made from eggs laid by those breeds that unite in themselves all the properties of fowls, but we have our doubts whether it may be by the non-sitters, as their surplus eggs are not produced in the winter when they are most valuable, but at the same time when all others are laying.

The other source of profit is feeding poultry for the table. It seems that few care to undertake this, but it will always be an important branch, and it increases daily. The non-sitting breeds are open to the same objection here as they are where eggs are desiderata. They entail an additional expense. But there is another and graver objection, and that is they all have black legs. It is said that the colour of the legs has nothing to do with the flavour of the flesh. Nay, some have even said the flesh of a black-legged fowl is whiter than any other, forgetting the effect of contrast. But there is one thing all will admit. If they want to buy fowls they will not have black-

legged ones if they can avoid it, nor will black-legged ones sell in the market while white ones are to be had. Our experience tells us that black legs lessen the value of table poultry, in many instances 8s., and in all instances 4s. per dozen. This is starting at a great disadvantage. The French breeds fatten so well, that we should class them as table poultry artificially fattened. Next to Dorkings, La Flèche, Crève Cœur, and Houdan are all good table birds; but where profit is concerned it is necessary to weigh all considerations, and above all to speak the truth—neither La Flèche nor Crève Cœur is hardy. The cocks die by scores, and are subject to complaints we have hitherto known nothing of. Our experience of these breeds is that the Houdan is the best and hardiest of all the recent importations. It is an excellent layer, very good for the table, and only speckled not black-legged.

(To be continued.)

BRAHMAS VERSUS CROSS-BRED BRAHMAS AND DORKINGS.

SEEING in your Journal, page 205, an account of produce from poultry cross-bred by "Powis," giving to thirty-two hens a produce of 1295 eggs, allow me to state what I obtained during the same months from pure bred Brahmas.

I began with twenty-two hens, and lost three before April (two died, one was sold), and the eggs numbered 1215—namely,

	Eggs.		Eggs.
January.....	108	May	160
February.....	217	June	112
March	295		
April	323	Total	1215

During the last two of the above months I had eighty-four chickens hatched, and have reared eighty-two, showing the chickens to be quite as hardy as those less pure.—A. F. NEWMAN, Worsborough Parsonage, Barnsley.

BRISTOL AND CLIFTON POULTRY SHOW.

THERE used to be an old saying that "the Bristolians always slept with one eye open." The Committee of the Bristol and Clifton Show appear to go a step beyond the old fashion—they sleep with both eyes open; at any rate, if this is not their condition they are at least "wide awake," appearing determined to make their Show a very important rival to Birmingham and Manchester. Encouraged by the magnificent collection of domestic poultry entrusted to their care in January, they have revised their prize schedule, and seem determined to be quite at the head of all the southern shows. They have many facilities for this in railway and steam-boat accommodation.

The approaching Show is, except in Bantams, devoted to chicken classes. To head the list there are eleven silver cups—one for the best pen in the Show, given by the President, S. Lang, Esq., jun., value twelve guineas. Dorkings, Spanish, Cochins, Brahmas, Game, Hamburgs, Bantams have each a cup for the best pen, value seven guineas. The best cockerel in the Exhibition has another silver cup of the same value, and the other two cups are offered for Pigeons. These cups are offered in addition to the money prizes, so that the best pen in the Show will have two silver cups, one of twelve guineas, the other of seven guineas, besides the £3 as first prize.

The prizes offered are for the most part three—£3, £2, £1. Dorkings have four classes, Cochins five, Game five, Spanish three, Brahmas four, Hamburgs six, including a special class

for Black, French fowls one—prizes £3, £2, and £1; Bantams no less than seven classes, Ducks three, Geese and Turkeys one class each. These latter are scarcely up to the standard of the remainder, whilst all exhibitors feel that the carriage on specimens of these is enormously heavy.

Thus far all is first-rate. I am sorry to have to draw attention to any defect, but I do think that every visitor who noticed the splendid collection of Polish fowls in January, when eleven out of fifteen pens were marked by the Judges, will regret that again all the varieties are grouped into a single class. This is not calculated to induce a larger entry, and I prophesy that it will be smaller. Last year this class was one of the great beauties of the Exhibition. Lastly, and this again I am at a loss to understand—Malays last year mustered very respectably; I will not be certain, but I do not think they were the smallest class in the hall: as a reward they are consigned to the cool retreat of "Any other variety." "Variety is charming," and even the "ugliness," as my friend "WILTSHIRE RECTOR" might call it, of the Malay has its admirers, and by comparison it would set off the beauty of others. These, however, are minor points, which, although they mar in my eyes the splendid programme, injure it very slightly.

To the more generally valued breeds valuable prizes are offered for a pair of pullets, the cockerel and pullet classes having only one female, a very desirable change; but I do not see why the pullet classes are excluded from the chance of the silver cup in their respective breeds. Surely it is more difficult to show a pair of pullets requiring to match well, than a cockerel and pullet! This year the Committee have added fourteen classes for Pigeons.

The entry fees are very moderate, a subscription of 5s. being also required, for which tickets of admission and a catalogue will be given. All this is certainly devised on a very liberal scale—and I sincerely hope the Exhibition may prove a grand success. The place of exhibition is the very best that could be obtained, the birds receive the greatest care and attention. The entries close October 19th: may their number equal the deserts of the prize schedule.—Y. B. A. Z.

ABERGAVENNY POULTRY SHOW.

THE quality of the poultry exhibited at this Show, held October 3rd, fully sustained the increased superiority which has been gradually manifested here during the last few years. The number of pens was, however, less than usual, which may be accounted for by the fact of Mr. R. H. Nicholas, of Malpas, always a large supporter of the Show, undertaking the duties of Judge, and thus not being able to exhibit. Other local exhibitors, such as Mr. Skinner, and Mr. Davies, were not represented. The *Dorkings*, *Bantams*, *Rouen Ducks*, and *Geese* were the best classes.

SPANISH.—First, Mrs. Jones, Glyu Pedr. Second, J. Williams, Nanty-derry.

DORRINGS (Coloured).—First, J. G. Holford, Buckland. Second, Mrs. G. Holford, Buckland.

COCHIN-CHINA (Any variety).—First, E. C. Phillips, Brecon. Second, G. Radcliffe, Groomout.

HAMBOURG (Gold or Silver-pencilled).—Prize, J. Williams.

GAME.—First, W. Lewis, Penycauwy. Second, G. Pritchard, Llanvihangel.

BANTAMS.—First, E. C. Phillips. Second, J. Williams. Highly Commended, E. C. Phillips.

TURKEYS.—First, Rev. W. Corfield, Llangatlock. Second, Mrs. G. Holford.

GESE.—First and Highly Commended, R. Rees, Abergavenny. Second, J. Williams.

DUCKS (Aylesbury).—First, Rev. W. Corfield. Second, Mrs. G. Holford.

DUCKS (Rouen).—First, Mrs. Lewis, Llanover. Second, W. Cooper.

Third, J. Williams. Fourth, G. Pritchard.

OSWESTRY POULTRY SHOW.

THE number of entries was somewhat below the average as to quantity, but it was a very strongly marked feature of the whole collection of poultry, that those classes of most utility were undoubtedly the best represented. This is a very satisfactory result, particularly when we take into consideration the fact that the district around Oswestry produces an unusual quantity of poultry for table purposes. The advantages of rearing a superior class of poultry for market, are far more important in respect to the realisation of good prices than most would at first thought imagine. The profits from poultry at many homesteads in this neighbourhood, so far from being what it used to be, simply "pin-money" for the good wife or daughters, now form a very considerable item in the yearly returns of the farm. For this reason poultry is now becoming very popular among the agriculturists near Oswestry, and not a few who looked upon the first outlay as "a great expense," are well satisfied with results far exceeding their first anticipations.

The whole of the poultry was shown under a very spacious tent, and in

single tier; so that with a little different arrangement as to the manner of feeding which will be adopted another year, there will remain very little if anything for the careful poultry exhibitor to complain of. The Black-breasted Red Game fowls were unusually good, a leading feature of the Oswestry Show; but one pullet of a most excellent pen otherwise, was sent out of the tent being decidedly "ropy," so much so, as to be incapable of seeing at all. As we have often remarked, it is wrong to send birds so suffering into any show, both for their own sakes and also for those fowls that are in strong robust health, for nothing is more infectious than roop, or more difficult to eradicate if once contracted. It is not just to others to place diseased fowls among healthy stock. A most singular matter connected with the Oswestry Show was that not a single pen of Brown Reds competed, though prizes of like value were offered for competition to owners of this variety of Game fowls. The Grey Dorkings, the White Dorkings, and the Partridge-coloured Cochins proved excellent. Mr. Tudman, of Ash Grove, Whitechurch, took both prizes for the latter variety with most excellent well-grown chickens. Some very good White Cochins were shown; but the Buff throughout were decidedly inferior. Spanish fowls were far better, in a well-filled class than have been seen at any previous show in this locality. The Brahmans were numerous, and many of them good; not a single pen of Light-coloured, however, were shown. Turkeys, Geese, and Ducks were very good; but the Selling Class and the so-called Cottagers' Class proved so indifferent that it required a great strain of conscience, to give such birds the allotted premiums.

The day was beautifully fine, and the attendance was extremely good.

The following is a list of the awards made at this Show, which was held on the 4th inst:—

YOUNG BIRDS.

GAME (Black-breasted Red).—First and Second, J. H. Williams, Welshpool. Highly Commended, G. Owen, Park-issa.

GAME (Duckwing, Greys, and White or Piles).—First, G. Owen. Second, Messrs. Church & Houlding, Nantwich. Commended, J. H. Williams.

DORRINGS.—First, Messrs. Gunson & Jefferson, Whitehaven. Second, E. Williams, Henle, Berriew. Highly Commended, — Bailey, Longton; M. Brooksbank, Manchester. Commended, — Bailoy.

COCHIN-CHINA (Brown or Partridge).—First and Second, E. Tudman, Whitechurch. Commended, J. R. Rodlard, Wington.

COCHIN CHINA (White or Buff).—First, G. Lamb, Wolverhampton. Second, Hon. E. Douglas Pennant, Penrhyn Castle.

SPANISH.—First, R. Davies, Chester. Second, F. James, Peckham Rye. Highly Commended, J. Walker, Wolverhampton; J. R. Rodlard.

HAMBOURG (Gold or Silver-pencilled).—First, J. Platt, Bolton (Silver-pencilled). Second, H. Pickles, juv., Earby (Golden-pencilled).

HAMBOURG (Silver or Gold-pencilled).—First, Messrs. Ashton & Booth, Mottram. Second, N. Marlor, Denton, near Manchester. Highly Commended, H. Pickles, juv.; T. Blakenian, Wolverhampton.

BRAMHA POOTRA.—First, H. Lacy, Hedden Bridge. Second, Hon. E. Douglas Pennant. Highly Commended, J. Little, Chester. Commended, C. Turner, Cheshire.

ANY OTHER DISTINCT VARIETY.—First, R. Charlesworth, Manchester. Second, A. Price, Bagley (Holands).

GAME BANTAMS.—First, W. F. Entwistle, Leeds. Second, J. Atkins, jun., Walsall. Commended, J. R. Jessop, Hull; F. C. Comber, Warrington.

BANTAMS (Any other variety).—First, T. C. Harrison, Hull. Second, S. and R. Ashton. Commended, J. R. Jessop; R. Charlesworth.

TURKEYS.—First, E. Leech, Rochdale. Second, W. B. Etches, Whitechurch. Highly Commended, Rev. W. J. Mellor, Colwick Rectory; F. E. Richardson, Uttoxeter. Commended, Rev. W. J. Mellor.

GESE.—First, Mrs. Hamilton, Tyddyn, Llandudno. Second, F. E. Richardson.

DUCKS (Aylesbury).—First, E. Leech. Second, W. B. Etches.

DUCKS (Rouen).—First, E. Leech. Second, E. Tudman. Commended, Messrs. Gunson & Jefferson.

FARMYARD CROSS.—First, Withheld. Second, E. Shaw, Plas Wilmot.

CONFINED TO OSWESTRY DISTRICT.

GAME (Black-breasted).—First and Second, H. Crutchloe, Oswestry.

DORRINGS.—First and Second, E. Shaw.

SELLING CLASS (Any variety).—First, W. D. Etches. Second, H. Crutchloe. Third, H. Walker, Ruthin.

GAME COCK (Amateurs' Prizes).—First, G. Owen. Second, H. Crutchloe.

ANY DISTINCT BREED (Cottagers' Prizes).—First and Second, J. Eccles, Oswestry.

EXTRA POULTRY.—Commended, F. H. Cooke, New Marton; G. Owen.

Edward Hewitt, Esq., of Eden Cottage, Sparkbrook, was the Judge.

NORTHALLERTON AGRICULTURAL SOCIETY'S POULTRY SHOW.

THE first meeting of the above Society took place on the 3rd inst., and proved in every respect a far better Show than the Committee expected, considering the lateness of the season.

The show of poultry was very good; indeed few societies can boast of so large an entry for a first Show, considering the small prizes that were offered and the limited number of classes, and no doubt the entries would have been very considerably increased if the Show had been previously advertised in this and other newspapers. The weather was very fine and dry, but bitter cold, and as the poultry pens were in the open air, it is to be feared some of the birds would suffer from its effects, though excellent pens were provided. We would suggest that another year the Committee should provide a tent, or have the Show held at least a month earlier. *Dorkings* headed the list, and were excellent. For *Game* there was a large entry, and good Black Reds were the winners. *Spanish* did not muster strongly, but the winning

pens were very good. *Cochins* were excellent, also the *Brahmas*. The *Hamburgs* were first-rate, both Gold and Silver competed together. In Spangled, Golden-spangled were first, but in the Pencil class the Silver-pencilled were decidedly the best. Several pens of these were as good as can be found at any show. *Bantams* were numerous but not good in quality; a nice pair of willow-legged hens was shown with a white-legged cock, and the owner declared that it was the first time that they had been henten—pray who had been the judges?

Ducks were excellent, particularly the Rouen, and Aylesbury. The *Turkeys* were numerous and very fine.

Mr. Horseman and Messrs. Hattersley & Wilson showed some good *Pigeons*. For *Rabbits* only one prize was offered, and an excellent pair of Black and White Lops secured it.

DORRINGS.—First, Second, and Highly Commended, J. White, Warlaby, GAME.—First and Second, W. Bearpark, Ainderby Steeple. Highly Commended, J. B. Booth, Killerby Hall.

SPANISH.—First, W. Horner, Thirsk. Second, W. Shaw, Boroughbridge. **COCHIN-CHINA.**—First and Second, R. E. Brown, Wass, Oswaldkirk.

BRAMA POOTRA.—First, Lady Galloway, Thirsk. Second, W. Shaw.

HAMBURGERS (Gold or Silver-spangled).—First, J. Johnson, Ainderby (Golden). Second, W. Severs, Kirby Fleetam (Silver). Highly Commended, — Brown, Bedale (Silver).

HAMBURGERS (Gold or Silver-pencilled).—First, W. Bearpark (Silver). Second, W. Smith, Ainderby Steeple.

BANTAMS (Any variety).—First, — Jobling, Swainby (Game). Second, Mrs. Barwick, South Otterington (White).

DUCKS (Rouen).—First, W. Lawrenson, Eaglescliffe, Yerm. Second, Miss Morton, Leak. Highly Commended, J. B. Booth.

DUCKS (Any other distinct variety).—First, J. Storey, Poeklington (Aylesbury). Second, W. Lawrenson (Aylesbury). Highly Commended, Miss B. Peirse, Bedale (Black).

TURKEYS.—First, T. C. Booth. Second, — Johnson, Northallerton. **GEESSE.**—First, R. Garrett, Welbury. Second, Mrs. G. Oliver, Northallerton. Highly Commended, T. C. Booth.

PIGEONS.—*Carriers.*—Prize, Messrs. Hattersley & Wilson, Thirsk. *Pouters.*—Prize, F. Horseman, Boroughbridge. *Jacobins.*—Prize, Messrs. Hattersley & Wilson. *Tumblers.*—Prize, F. Horseman.

RABBITS.—Prize, W. Lawrenson. Highly Commended, W. Guppy.

The Judges were Mr. S. Burn, Whitby, and Mr. Barker, Hovingham, Malton.

DRONE-BREEDING QUEEN—EXCLUDING FROM SUPERS.

The following notes concerning a drone-breeding queen will probably interest your apiarian readers:—

On the 29th of June a Ligurian queen was hatched in a populous hive that had lost its queen some time previously. On the twenty-first day of her life, she being still a virgin, I found her partially encased, and released her. Next day she was severely encased, when I caged her for twenty-four hours, but on being released she was encased a third time; releasing her from a fourth imprisonment on her twenty-sixth day, I removed her for five hours, and next day found her free for the first time, but had to remove her again next day, and after a few hours put her on the landing-board, where she was immediately rolled up into a ball as big as an apple. On the thirtieth day of her life finding her again imprisoned, with her wings torn to rags, and one of her hind legs disabled, and finding also she had destroyed a sealed royal cell which the bees had formed on a comb introduced five days before, I let her fly, thinking to see no more of her, and next day gave them a fresh brood-comb. Examining the hive on the thirty-fourth day after her hatching, I found her back, and at full liberty, saving that she was restrained from meddling with two sealed queen cells which the hive contained, and, moreover, she had now the mark of impregnation upon her.

From this moment she was never molested. On the thirty-seventh day I found drone eggs, and on the fortieth she began to lay in worker cells, placing her eggs irregularly, and often two in a cell, on account of her disabled hind leg. I now removed the remaining royal cell, the first having been previously removed. Examining on the fifty-second day I found three combs full of drone brood sealed in both worker and drone cells, and next day removed her. She survived for some days, when, finding her dead, I delivered her to a skilled apiarian for examination.

Have any of your readers practised the separation of the super from the stock hive by a grating impervious to queen or drone? Are three-sixteenths of an inch not rather wide for such a grating? And do the bees pass and work as freely as in the ordinary way? Some such arrangement is to me a desideratum, as I have had two supers, forty-pounders, completely ruined this season by the queen's getting into them.—*APICOLA.*

On dissecting the above-mentioned queen in the presence of "APICOLA," we found what may be called an imperfect impregnation.—*R. S.*

[This is a very remarkable and exceptional case, since every

drone-breeding queen which we have had the opportunity of examining, has turned out an unquestionable virgin. It may, moreover, tend to explain what has always appeared to us to be a mistake of the illustrious Huber, who records that in at any rate one instance he witnessed the return of a queen with the usual sign of fecundation, and that she eventually turned out a drone-breeder.

We have never tried to exclude the queen and drones from supers in the manner above referred to, and shall be obliged to any of our correspondents who may be able to give the required information.]

OUR LETTER BOX.

VERMIN ON FOWLS.—"I would recommend 'A. K. C.' to use flowers of sulphur freely in the hen-house. When the nesting-places are cleaned out sprinkle a little sulphur on the floor, and also on the top of the nests. Many hens, I believe, sit indifferently from being worried by these parasites. I use wood ashes for the floor of the hen-house, and when a fresh supply is added the fowls and Turkeys very much enjoy a dust bath. I do not like any grease, it soils the plumage of white poultry.—*L. B., Sussex.*"

GAME HEN DISORDERED (*An Old Subscriber*).—"You do not state whether the hen has lost flesh, or whether she has become very thin. If she has passed into the thin stage, and has become very dry-faced and wizened, looking as though she had a dirty green powder on her face, we advise you to kill her—we know no cure for it. If she has kept flesh you must purge her till the evacuations are brown and white. So long as she passes green slime she will not improve in condition. Castor oil is the best purgative. Try Bailey's pills.

SILVER SEBRIGHT BANTAMS (*N. B.*).—"They ought not to have feathers on the legs. The cockerel you name has a stain of the "beoted" Bantam.

SPANISH CHICKENS DYING (*Trentside*).—"Such complaints as you make will be common now that changeable weather has come. Within these ten minutes we have seen a lot of Spanish chickens squatting under a wall, and one of them with its head on its back and sunk between its shoulders. We can see nothing that a little extra feeding with stimulating food will not cure. The sudden death of your birds indicates something more than this. The most virulent case of roup is only fatal after many days, if at all; but the duration of life after the attack with you seems to be about ten hours. We think your feeding must be at fault, and that your birds are too low in condition to bear up against even a trifling attack. Feed well and often, but little at a time, on good meal. While cases of sickness occur do not spare the ale. Take away any sickly birds, place them by themselves, so that they may have extra attention. Watch them closely, that you may be able not only to learn how to treat the malady, but also to anticipate and prevent.

WHITE-CRESTED BLACK POLANDS (*A Regular Subscriber*).—"Honesty is the best policy. Black Poland with white tops should be shown without trimming of any kind. When such is the case they cannot be shown without some black feathers in front. These are natural to them, and no bird of the breed was ever bred without them. The top-knots of the hens should be as large as possible, close in feather, and shaped like cauliflower. That of the cock should be composed of long feathers, like those of the hackle or saddle, all inclining outwards from the centre. It should be large and full of feathers. In both, the black patch in front is perfectly correct; but mixture of black in the other parts of the top-knot would be a disqualification.

EXHIBITION PENS (*B. H.*).—"We approve of the Birmingham pens. We know no better where space is limited. We cannot say the cost of them. Mr. Lythall, the Secretary of the Birmingham Show, will, we are sure, give you any information you may require. If you are about to make pens, do not let those for small birds, as Bantams, be as deep as those for Dorrings and Cochins. The small birds get to the back and cannot be seen.

TURKEYS AS FOSTER MOTHERS (*H. L.*).—"We have never used Turkeys for hatching chickens, nor do we know any one who has. We, nevertheless, know they have been so employed, but not to any extent. You seem to imagine that by putting eggs under a Turkey she immediately becomes broody; such is not our experience. Broodiness follows on the exhaustion of the system from laying. If you hatch under a Turkey she will require to be in confinement at least ten weeks—indeed, she should be so until the chickens can care for themselves. A Turkey is a stupid mother. If she start with thirty chickens she will drag them with her through dew, and frost, and wet, leaving one or two behind every five minutes, and being perfectly satisfied so long as she is followed by the two or three that are strong enough to live notwithstanding her neglect. To Italy thousands of chickens are reared under Capons. They will always sit. It is their hobby, and they are excellent mothers (?). You may arrange for sitting hens for instance of the proper age. They should be Brahmas or Cochins. For pullets, birds that are hatched in April, 1886, will be broody in January, 1887, and so on. It is neither inconvenient nor expensive to do this, as large numbers of chickens are not wanted in January and February. We believe the want of broody hens will be felt more every year, as, for the sake of egg-producing, so many keep the non-sitting breeds.

PRIZES AT BEVERLEY POULTRY SHOW.—"We are informed that these have not been paid, and that no notice is taken of letters applying for their payment. This ought not to be.

BIRMINGHAM SCHEDULE OF PRIZES (*J. Frith, jun.*).—"It is published. We have one.

STARLING'S BEAK (*C. A. J.*).—"File off the projecting upper part of the beak. What can have caused it no one can tell.

SCOUR IN PIGEONS (*Inquirer*).—"Feed your birds on old beans; cram them with pills of old mortar, three each day. Broken mortar is good on the floor, but sand and gravel give a neater appearance.

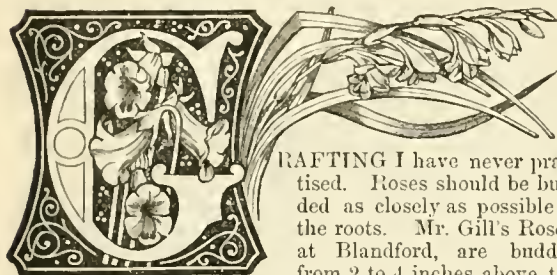
WEEKLY CALENDAR.

Day of Month	Day of Week.	OCTOBER 17—23, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.								
			Day.	Night.	Mean									Days.	m.	h.	m.	h.	m.	h.	Days.
17	Th	Royal Horticultural Society, Promenade. 18 SUNDAY AFTER TRINITY. Sun's declination 10° 38' s.	58.5	41.0	49.8	17	29	af	6	3	af	5	5	8	41	af	10	20	14	32	290
18	F		60.6	41.2	50.9	19	30	6	0	5	59	8	46	11	21	14	44	21	14	44	291
19	S		59.5	39.8	49.6	21	32.	6	58	4	1	10	after.	22	14	55	22	14	55	292	
20	SUN		59.1	39.6	49.3	18	34	6	56	4	10	11	31	1	15	5	23	15	5	23	293
21	M		58.2	39.9	49.0	18	35	6	54	4	morn.	12	2	24	15	15	24	15	15	24	294
22	Tu		58.9	42.9	50.9	23	37	6	52	4	22	0	47	2	25	15	25	25	15	25	295
23	W		58.2	39.8	49.0	21	39	6	50	4	34	1	17	3	25	15	33	26	15	33	296

From observations taken near London during the last forty years, the average day temperature of the week is 59.0°; and its night temperature 40.6°. The greatest heat was 69°, on the 22nd, 1863; and the lowest cold 17°, on the 23rd, 1859. The greatest fall of rain was 0.96 inch.

CULTURE OF ROSES ON THE MANETTI STOCK.—No. 4.

PROPAGATION BY BUDDING.



BUDDING I have never practised. Roses should be budded as closely as possible to the roots. Mr. Gill's Roses, at Blandford, are budded from 2 to 4 inches above the

radius of the roots. Had all propagators done the same, and had the cultivator planted and pruned the Manetti Rose properly, the stock never would have been in disgrace. Mr. Gill and his able foreman, Mr. Doddridge, scrape away the earth, and hence they can bud lower than those who bud above the soil. If you obtain plants budded high, you must plant them half-depth, and cover the point of union with soil in the way Potatoes are earthed up.

Manetti cuttings for budding should be planted in September, and be trodden in firmly. Plant them in shallow trenches, instead of on the flat. For simple propagation the plants may be 6 inches apart and 18 inches from row to row: that is the distance at Mr. Gill's nurseries. An acre of Manetti Roses, I should think, would pay well at 1s. per plant. I buy them by the hundred at much less for ready money. I suggest to nurserymen that they should make a difference between large purchasers and small, and also between credit and ready money. "A nimble ninpence is better than a dull shilling."

EXHIBITION HINTS.

In growing Roses for exhibition, shades are necessary. The blooms should not be wetted, nor should you try to force a Rose to expand with your fingers. Simply hold it towards the wind, and vibrate it. Do not touch a delicate-coloured Rose without white kid gloves; the blooms are apt to soil. Place in your box, nicely dressed with tree moss, expanded blooms, or better, blooms about to expand, rejecting any that have clefts in the side. Take a good supply of unexpanded Roses: on arrival at the show they will often be your best. At Reading, in 1861, I won first prizes for the trebles and singles by taking an extra number of spare unexpanded Roses. I never knew Roses decay so fast as on that occasion. The weather was hot and foggy. The best weather in which to travel with them is when the wind is north or north-east. In travelling with them keep a wet cloth over the cover of the box. Do not paint the cover of the box, paint draws the heat. Keep the cover of the box close. A small gauze wire at the side of the box may do good by letting out internal heat. Place your largest Roses, as well contrasted as you can, in the top line, the next largest in the second line, and the

smallest in the third line, as the eye of the spectator goes forward. They look best when they are all even in size; but this can seldom be combined with variety of colours. It is better to put into the box a level Rose than a splendid Rose in some points, yet signally defective in one. Put a Rose that has no foliage, or inferior foliage, between two Roses that have good foliage. Roses out of condition have no claim to a prize, however good they may have been. Sprawlers with shilling eyes are horrors! Large Roses with bad centres, bad outlines, and a rough aspect will not do. Medium-sized Roses travel best. I believe those Roses to be most fit for exhibition which have most of the following qualities:—Correctness of outline, fulness to the centre, well-disposed substantial petals, smoothness of petal at the edges, roundness of petal, depth of petal, choiceness, intensity and fixity of colour, good foliage, and a firm erect stalk.

For cultivation in the open ground Roses should be of vigorous growth, free and constant bloomers, and tough-skinned, to endure the severity of the winter.

Before you start for the exhibition make up your mind to keep your temper. If you are beaten, hold your tongue. If judges act unfairly they lose their self-esteem, and the good opinion of a discerning public. As far as London is concerned, I have, with one exception, thought that the adjudications have been right. As regards those with whom I have acted in London, the impression left on my mind is that they were most painstaking and fair men. In some country places all kinds of favouritism are practised.

DISEASES.

These are chiefly mildew, orange fungus, red fungus, black mildew or black patch, chlorosis, and honeydew.

Mildew is one of the worst diseases, especially if it sets in early, before the wood is ripe. August and September are the two months in which it is most apt to appear, and the weather most suitable to it is such as would produce Mushrooms. If you hold up a mildewed leaf to the level of your eye, and survey it with a powerful glass, you will see little fungi. The general appearance of a mildewed leaf in the early stage of the disease is that of snow. Mildew does mischief by rooting into the tissues of the leaves and stopping up the breathing pores. In September, if the top shoots are very badly affected before you see it, the tops may be cut off and destroyed. I use blue vitriol (2 ozs.) dissolved in hot water, and added to an ordinary watering-potful of cold water. If the case is unusually bad I use it 1 oz. stronger. In light cases, where it only appears here and there on a leaf, I rub it off with my fingers. If plants were kept well watered over their foliage and roots from the time of leaf-development mildew would be much more rare.

Orange and Red Fungus affect the under sides of the leaves, and are, therefore, more difficult to cure than mildew. My plants have had but little of either this year, and I have done nothing by way of cure, not knowing what can be done. I am inclined to think that the best way to save the health of the plant is to take it up, and fresh plant it at once.

Black Mildew, called, also, scald and black patch, is

another disease which destroys the leaves. My Roses have had but little of this in the present year, chiefly at the base of the plants. I am not sure that it is a fungus at all; it may arise from changes in the atmosphere. I never observed it on Roses under glass.

Chlorosis, or yellow-green sickness, is the effect of damage done to the leaves. The best way to stop it is to take up the plants, shake them out, and fresh plant them; this will stop the sap, which otherwise will affect the trees. Chalky ground is said to be conducive to it. My trees came from Rushton much affected by it, but I made them perfectly healthy, with new foliage, before the winter set in. I planted 1100 Manetti Roses between August 24th and September 12th, 1866; one hundred of them were not much better than pot plants. I lost last winter about thirty plants, and the others, pot plants included, are now lofty trees.

Honeydew, which is a viscous secretion, and not the droppings of aphides or insects as some suppose, must be washed off as soon as the slime appears, or it will harden and stop the pores of the leaves and destroy them. Water at the roots and plenty of it over the leaves is the preventive and the cure. Stirring the ground lightly over the roots will also do good. Bees are fond of honeydew, and a year that abounds in honeydew is always a good honey year. I believe excessive drought to be the cause of it.

INSECTS.

The chief are aphides, the budworm, and the anther sawfly. Catch and kill all the aphides you can in the spring, and fall of the year—in fact, at all times, and keep the trees well syringed, or watered over the leaves. Again, "Water is the best thing." Killing by hand is the best remedy for the other two. Manetti Roses produce so many buds that I never trouble about them. The sawfly is rare with me. I have had, however, two of my trees of *Triomphe de Rennes* "fretted" by them. I have not seen here two dozen aphides since the spring.—W. F. RADCLIFFE.

WINTER TREATMENT OF PEACHES, NECTARINES, AND APRICOTS IN POTS.

The article by Mr. Douglas in your last Number is sound and practical, but I beg to protest against wintering trees of the above-named kinds in the open air. It may be practised by young cultivators for two or three years with impunity, but when we have, as is often the case, heavy, drenching rains, severe weather, and deep snow, which as it thaws completely saturates the earth in the pots, mischief ensues; besides this, although frost may not apparently injure the shoots, yet as is the case with wall trees after severe winters, they are to a certain extent paralysed, and liable in spring to the attacks of aphides. I tried the experiment some ten or twelve years since, but have never repeated it. I often read in the American papers about the shoots of the Peach trees, although ripe and hard, being injured by severe frost, and dropping their blossom-buds. All potted trees of the above-named kinds should be in the orchard-house by the end of October, the pots placed close to each other, and covered with some dry hay; they are then safe till March. There must be something peculiar in the soil used by Mr. Douglas. In the hottest weather we give water but once a-day, sprinkling the paths once or twice.

The surface dressing is placed so as to form a concavity round the stem of the tree, holding a large quantity of water, which, descending through the centre of the mass of earth, completely saturates it. Without this concavity workmen often make watering a sham.

With respect to the size of pots, the 15-inch pot is the *just milieu*. It is true that as large fruit may be grown in 11-inch pots, but not so many of them. The 18-inch pot is here the maximum size, and grand trees are grown in pots of that size. They are seldom moved, but are easily lifted by two men with two stakes, attached at one end by a stout piece of cord. It is not bad practice to place Peach and Apricot trees out of doors after the fruit is gathered. Their shoots become red, and their leaves healthy; they only *seem* to have ripened their shoots better than those kept in the house. As to blossom-buds there are always too many. In that respect I have never seen any difference between those kept in the house and those turned out; but the removal of the early-ripening sorts makes room, and is the occasion of those left in the house receiving more light and air.

I repeat, all the trees I have alluded to should be in the house before the end of October, and dry and warm for the

winter. Mr. Douglas will, I am sure, excuse my differing from him on one point, and he will confer a great favour on your readers if he will give the size of the pots his Vines are growing in, and his mode of treatment; it must be sound and good, or he would not produce such bunches of Black Hamburgs.

I beg leave here to confess that it is very agreeable to my feelings, now I am old, to read sound articles on orchard-house culture, so scoffed at in its early days. I have also lived to see the Manetti Rose stock, after many years of abuse, now highly popular both in England and America, and again Pears on Quince stocks, which twenty-five or thirty years ago, some *quasi* clever people thought me a little crazed to advocate, are now to be found in all gardens where the climate and soil suit them, and where the cultivator is well up in modern fruit cultivation.—THOS. RIVERS.

VINES AND VINE BORDERS—NATURAL TEMPERATURES.

FAMILIAR only with the Vine in an English viney, could any one understand the strength and luxuriance of growth alluded to in the prophetic benediction addressed to Judah—"Binding his foal unto the Vine, and his ass's colt unto the choice Vine?" Its thick and fleshy roots penetrating into the deep fissures of the limestone rocks enabled it to endure the long drought between the latter and the former rains. Indifferent alike to the heats of summer and the frosts of winter, perfectly adapted to their stony soil and variable climate, its vigour and never-failing fruitfulness were subjects of continual reference and grateful admiration to the whole Jewish nation.

A close and damp atmosphere of 100°, charged with pestilential vapours from sulphur-bedaubed hot-water pipes, could scarcely be so conducive to the healthy growth of the Vine as the pure and transparent air of Samaria, which enabled Jotham to stand on the summit of Gerizim and speak to the men of Shechem in the valley below. We take the strongest climbing plant of the temperate zone, we plant it in a shallow and porous border, resting upon Caithness pavement or flagstones, supported on brick pillars. We enclose half this border within four white-washed walls, and train every shoot and every leaf of the Vine to receive the full glare of the sun through the glass, while the shade temperature beneath is equal to that of Western Africa. Such treatment may be scientific, but it is not natural. It is, however, the treatment recommended by Mr. Thomson, and endorsed by half the gardeners in the kingdom.

The highest east temperature registered on board H.M.S. "Wilberforce" during the expedition for the suppression of the slave trade was 84° Fah. on the 20th of August, 1841. The highest temperature registered on board H.M.S. "Albert" when upwards of three hundred miles inland was 92° Fah. on the 26th of September following. These temperatures were taken at the end of the rainy season, and within 9° of the equator.

I am somewhat disappointed that those correspondents who were so eager to give their opinions on this subject on the appearance of Mr. Wills's extraordinary letter about the Vine borders he intended making at Huntroyde, should have nothing more to say on a matter so interesting to the readers of the Journal as the proper cultivation of the Vine. To myself it is becoming a question of some importance, for I have now 259 Vines planted in inside borders, made with the ordinary soil of my garden and a small addition of stable manure. Of this number 164 were grown at the bottom of a north wall till the first week in August, when they were taken into the houses and planted without even removing the drainage. Their progress has been perfectly satisfactory, and the wood will be fully matured by the middle of December. They will be started again in January, with the certainty of ripening a good crop about the end of June, without injury to the season's growth, or to their future well-doing.

In Mr. Thomson's treatise on the Vine I find it stated, that if a Vine be allowed to grow at one season of the year it will assert its right to rest at another. Now, the trees and plants of a temperate climate are arrested in their growth because of the absence of the light and heat necessary to their continued development. Within the tropics the same effect is produced by the dry season. The growth of the Vine may be divided into three stages. In the first stage the shoots are rapidly extended till the leaves attain their full size. The second is almost wholly given to the swelling and ripening of the fruit. In the third the growth is as great as in the first, but the increase is as much in size as in length and in a proper tempe-

ature the leaves while still green becoming partially detached from the shoot is an unerring sign of a perfect maturity of the wood, which then becomes merely a means of communication between the root and the bud. In this state it is in the best possible condition to support a new growth, and rest can add nothing to its maturity.

At page 48 Mr. Thomson says:—"By the time the action of the leaves had ceased these roots were anything but ripe, and they all perished during the winter rains back to the old stem-roots from which they sprang. The Vines, nevertheless, have a given amount of stored-up sap in them, though they have lost their active roots. . . . Whilst this stored-up sap lasts they grow vigorously enough." I not only deny the truth of this statement, but I assert it to be impossible for any tree or shrub to contain within itself sufficient moisture to support a vigorous vegetation. If this idea of stored-up sap were tried, then a Vine carefully taken from the ground and suspended in a proper temperature would continue to grow till its stores of sap were exhausted.

I invite Mr. Thomson to a fair discussion of his book in the hope that it may prove both interesting and valuable to the readers of THE JOURNAL OF HORTICULTURE.—H. S.

EARLY BEDDING-OUT AND ITS RESULTS.

LAST autumn you inserted a letter from me on the subject of early bedding-out, &c. (vol. xi., p. 364), which letter brought out a reply from "VINDICATOR" (page 406), in which he said that Chester being "near the sea" (it is only twenty miles off, the estuary of the Dee, which is eight miles off, having a very different climate from the coast proper), "the atmosphere is not so much affected by the late daybreak frosts in May."

Now, there was no use replying to this by a mere statement of temperature in May, especially as my observations had not been recorded carefully enough. I therefore resolved to plant out still earlier in 1867, and observe the result. Accordingly I began on the 24th of April by planting a row of *Cybister* Pelargonium under the house wall facing south, but exposed to east winds. On the 2nd of May I planted some *Calceolarias* and Pelargoniums, and continued from that day to plant out whenever I had time to spare, till, by May 14th, I had nearly all my beds filled, with the exception of the more tender bedding plants, such as *Perilla*, *Amaranthus*, *Iresine*, &c. Pelargoniums, *Verbenas*, *Lobelias*, and *Calceolarias* were planted out in the most exposed situations. We had extraordinarily hot weather in the early part of May, the thermometer in the shade registering 78° on the 8th, and from 70° to 75° on several days before. This gave the plants already out a fair start, and the earliest began growing well. I was not at home during the severe weather from May 20th to 25th, but on my return I found the thermometer (a minimum of Negretti & Zambra's), had registered 28°, and a bed of early Potatoes, protected both on the east and south by a high wall and a greenhouse, was entirely destroyed; yet not a single bedding plant was seriously injured. Some had their leaves browned, especially *Lobelias* and *Verbenas*, but all recovered, and were in full bloom far sooner than any that were planted later. The row of Pelargoniums planted April 29th had not even a leaf browned. This row was in full beauty by the beginning of July, and is very fine at this moment.

And now for the rest of the season. I have never seen Pelargoniums grow better or flower so well as mine have done this summer; but from some cause, possibly the long continuance of cold north winds in June, some of the best sorts, and more especially *Stella* and Lord Palmerston, were late before they began fairly to bloom; but when they did begin I never saw more gorgeous masses of colour. I find, however, that the latter will not stand wind and rain well, and should be planted in a sheltered situation.

I had nearly all my beds as gay in spring as they were afterwards. The border in which I planted *Cybister* was full of clumps of Crocuses, Hyacinths, Tulips, and Narcissus, and the bulbs were all left in the ground, the bedding plants being planted among them. Other beds were masses of early single Tulips, Crocuses, or Hyacinths, which were taken up as they were over by the beginning of May. A bed of Wallflowers was reserved for the more tender plants, as *Ricinus* and *Amaranthus melancholicus ruber*, which I never plant out till June, and the latter plant will hardly grow even then in the most sheltered place. Two other beds containing Pansies, &c., which were gay till July, were filled with Pelargoniums plunged

in six-inch pots, and were at once gay again, the Pelargoniums having been potted in May. An edging of *Tegetes pumila*, which is easily moved, was added. I hope to make use of this system, having Pelargoniums established in pots to plunge, to a greater extent next year, as by this means one may indulge in the later spring flowers without losing any time with the bedding plants.

We see, then, that the principal bedding plants are hardier than Potatoes, and it is clear that the earlier they are planted out the longer is the garden gay. Spring decoration may be secured as shown above.—A. O. W.

GRAPE JUDGING.

I THINK Mr. D. Thomson's suggestions (see page 250), should be carried out next season, as it would effectually settle the question—Colour *versus* Flavour.

I would suggest that the several productions be not submitted for judgment before three weeks from the time of colouring, as a dish of black Grapes might be shown as soon as coloured and not really ripe: consequently they would be at a disadvantage.—JOHN ALLISTON.

MR. MILLER'S VINERIES, BISHOP'S STORTFORD.

IN looking over your last year's volume (vol. XI.), I find, page 420, a description of these vineries, and particularly a notice of one of them, a span-roof, 200 feet by 30, with inside borders. In page 479 Mr. Wills denounces such borders as a rank heresy, and with powerful logic says, "Would Mr. Meredith make outside and deep Vine borders, when a great portion of his living depends on the result?" Again, Mr. Wills says, "I feel sure, that the Vines at Bishop's Stortford will show next season that the once-a-month system of watering during their growth, and their being so long kept without any, is highly injurious to them." Alas! for this prophecy, the heresy of inside borders seems likely to simplify the making of Vine borders, now such a bugbear to the tyro in Vine culture.

Living within a pleasant drive of Bishop's Stortford, I drove over a few days since to look at the vineries; there are some wide and lofty lean-to vineries about 300 feet in length, all with outside borders. The Grapes in these houses are as fine as can be wished for, and the crop abundant. They are all Muscats and Hamburgs. The Vines are now five years old. In the span-roofed house, with its inside border of the length and width given by "Vitis," the Vines are three years old. This house is so well described by "Vitis," page 420, that I need not dwell upon it. I only wish to point out the failure of Mr. Wills's prophecy. The Vines are in the most exuberant health, and the few bunches they are allowed to carry are quite first-rate. As they are not yet allowed to carry a full crop like the lean-to houses, the bunches are larger, and I noticed particularly that the Muscats were much finer in colour. This alone is a strong argument in favour of an inside border; but as I really know but very little about Grape-growing, I leave the subject to such men as the Messrs. Thomson, the illustrious *Arcades ambo* of the Grape-growing world.

I was particularly struck with the avenue of Black Hamburg Grapes, formed by two rows of Vines (trained upright to stakes), one on each side of the central walk, and 6 feet apart in the rows. They are all bearing beautiful bunches; and a curious fact is, that the bunches close to the ground, although some 15 feet from the glass, are as deep in colour as those on the upper part of the Vines. This seems against the opinion which has, I think, been broached by one of our clever theorists—that glass obstructs the colouring rays, so that if fruit is at some distance from it they are weakened.

It has become a question whether the produce of this fine house would not have been more than doubled, if the whole area of it had been planted with these upright Vines about 4 feet apart, leaving the roof clear, and thus forming "a vineyard under glass." It is, I am inclined to think, a matter quite worthy of being taken into consideration by those who are building vineries; the Vines thus trained are so beautiful, and remind one of the garden Vines in warm climates.

The borders were dressed last spring with half-inch bones and manure to a depth of nearly 2 inches, this will be given annually.

Mr. Wills alludes to the small quantity of water given to the

Vines. They have been watered this season as described at page 420, and had their last supply in the middle of August. Mr. Ward tells me that as soon as the fruit is gathered, he will give the borders a sound watering, and leave them till March. The manual labour is heavy; but this might now be obviated, by having two perforated zinc pipes laid on the surface on each side, and a cistern slightly raised to give gentle pressure.

Mr. Ward, Mr. Miller's gardener, not only excels in Grape-growing, but may point to his Pines as models of successful Pine-growing. I saw with him Smooth-leaved Cayennes, weighing from 9 to 10½ lbs., beautifully ripened.—VIATOR.

STORING POTATOES.

ACCEPT my thanks for your reply to my inquiry, page 212; but I must ask of you a little further information. When ought one to consider a Potato ripe? for here seems the difficulty. The premature death of the stem by disease cannot be said to be a proof of the maturity of the tuber. By the end of March most growers here have completed planting. By the middle of July, when there is a severe visitation of disease, such as, for instance, this season, all the stems have disappeared. Up to this, I take it, the poison in the plant is being actively circulated. Some tubers become infected by it, others withstand it; but, on the death of the stem, is it your opinion that this circulation is at an end? or does the process continue to spread in the soil? Because it is obvious that if there is an end to such circulation upon the death of the stem, the tubers may as well lay for a time in their isolated condition in the ground as be "heaped" anywhere. The difference would be, that if drawn—say in the first fortnight in August, some Potatoes would be stored having disease in such an incipient form as not to be noticeable at the time of drawing, and they would naturally injure those about them in the storehouse, and would be certainly themselves soon unfit for use; but if, on the other hand, these Potatoes were left undisturbed till the end of September the affected tubers would have fairly rotted down, and the Potatoes then appearing sound would really be so, and therefore could be heaped without any risk.

The old people in this neighbourhood tell me that it was the rule before the disease was known to draw Potatoes in the first week of November. Then they planted later, it is true; but it is, of course, also true that the dying of the stem occupied longer time then, when the plant continued free from taint, than in these days of disease.

I take it, if it can be laid down what time certain sorts under ordinary conditions would require to ripen, and if diseased or not, what would be the best time to commence drawing for store, the difficulty would be met. Here there are strenuous advocates of two opposite courses: the one bids you draw directly the plant dies, and so save the spread of the infection; the other advises you to leave them untouched for some two months later, and so get riper Potatoes and less risk in storing. I appeal to you to relieve me from their contradictions.—CORNUBIA.

[A Potato is ripe as soon as its outer cuticle, or skin, will not come off when gently rubbed. If the weather be fine the tubers may be allowed to remain in the soil until the stems are dead; but the tubers neither increase in size or ripeness after the stems begin to turn yellow. If the stems are diseased they had better be cut off, for they supply diseased sap to the tubers. If the stems are only cut off at about half their length, and the lower half is still green, the tubers may be left in the ground until the remaining portion of the stems shows evidences either of decay or of disease, when, in either case, the tubers should be taken up and stored. There is no doubt that so soon as the stems are dead all circulation in the tubers has ceased; but it is quite an erroneous conclusion that therefore they may as well remain in the soil. They may do so if a depth of soil is heaped over them to preserve them from excessive vicissitudes of temperature and moisture—the prime agents of decay; but it is much easier and more safe to take up the tubers and store them in a cold, dry outhouse in alternate layers with sand, so that scarcely two Potatoes touch. This is very different from storing them "heaped," which promotes heating, and consequently is the worst of all modes of storing. When stored in sand, if a tuber decays it does not affect those even nearest to it; and even a tainted one will not decay so fast as when in the wet soil.

We remember, as your neighbours do, when the Potato crop was not usually taken up until late in the autumn; but that

was before "the disease" had become so excessive. "Scab" and "curl" were then the diseases most injurious, and early or late taking-up had no influence over them.

No certain time can be assigned as requisite for a Potato plant completing its growth; but there are some varieties which, in defiance of an unpropitious summer, are ready for taking up by the end of July or early in August. These are the least liable to the disease, and some of them should always be grown for storing.

What we have said is only an amplification of what we before recommended—namely, that unless the weather is fine we recommend our own practice of taking up the tubers and storing them in sand so soon as the stems begin to assume a yellow hue.]

WINTER TREATMENT

OF TRICOLOR, BRONZE AND GOLD ZONAL, AND OTHER PELARGONIUMS.

IN reply to the inquiry of your correspondent "H. J. Jackson," as to the best mode of wintering these beautiful plants, I will state as fully as I can my mode of treating them; and I feel sure, if he will follow the advice I shall give him, that he will succeed, for I have grown them now two winters in one of the wildest and worst parts of Lancashire, and have found no difficulty whatever in growing and propagating them freely.

In the first place, your correspondent states that his Tricolor Pelargoniums have been growing in frames, and that he has now housed them. The place most suitable for the Tricolor varieties is a shelf near the glass in an airy place, where the air can circulate freely amongst their foliage. They are very impatient of a damp humid atmosphere; care must therefore be taken to afford them all the air possible, and water must be given sparingly through the short dull days of winter. A dry temperature of from 45° to 55° is the most suitable for them throughout the winter.

In the first week in January the plants may be shaken out, and repotted in small pots in a good, free, sandy loam, with a little leaf soil mixed with it. Very little water should be given them till they have begun rooting freely into the new soil. At the end of January they may be placed in a warmer temperature of, say, 60°, still keeping the plants as near the glass as possible, and giving them the benefit of air on all favourable occasions, but on no account must they have too much moisture. This must be afforded as sparingly as possible till March, when the plants will grow vigorously, and will require water more frequently.

Cuttings may now be taken off as fast as suitable shoots appear on the plants, but it is not advisable to take any until they have made five fully developed leaves; and in taking them care must be exercised to leave an eye or two beyond the stem of the parent plant. If the plant is in a vigorous state of growth it will soon push out another set of shoots, which should again be taken off, using the same precaution of leaving dormant eyes. By skilfully carrying on this practice the parent plant in a few months becomes well furnished with shoots. The same temperature as that in which the plants are growing will suit the cuttings. I have treated fully on the management of these in one of the spring numbers of this Journal (No. 316). After the young plants are rooted and growing freely their heads may be taken off, but not before you can take a cutting having the same number of leaves as recommended above, and leaving two or three good leaves on the plant. As soon as the eyes have broken on the young plant from which the cutting has been taken, and it has formed some small leaves about the size of a shilling, it may be shifted into a larger-sized pot. This will give it a fresh start, and will soon enable it to produce from two to four good cuttings, according to the number of eyes left on the plant; so the work of decapitation and propagation may be continued under glass up to the end of June, from which time till September the cuttings will strike much more readily in the open ground. I merely stick them into the common garden soil, and as soon as the cutting begins to emit roots it is taken up and potted; this will be in about three weeks after it has been inserted in the soil.

If any considerable number of cuttings is put into the open ground at once during the hot summer months, it is as well to shade them a little for a few days. This may be done by simply sticking a few evergreen branches amongst them, which prevents the sun from scorching their leaves, and preserves the strength of the cuttings better. As soon as the cut at the base of the cutting begins to heal, which will be in a week or

ten days, the cutting will then assume an upright habit and the leaves will begin to stiffen. The shading should then be removed, allowing the sun to shine full upon them. Plants struck in this way are much stronger, have better constitutions, and grow much more freely than those from cuttings struck under glass. Treat any plants of new Tricolor varieties which you may possess, as recommended above. If you place them in heat now, and excite them into growth before their proper growing season arrives, you will weaken the constitution of your plants, and, perhaps, lose them altogether. During the months of October, November, and December the plants should be at rest. They are then ripening their wood, which is thereby naturally prepared for a greater amount of forcing and excitement during the spring following. Of course, the plants must not be allowed to suffer from want of moisture during their season of rest. A little water given once a week, just to keep their roots from shrivelling, will be all that will be required, unless the weather be very severe, and strong fires have to be kept up to exclude frost. Then they will want water perhaps twice or more every week; but this, of course, must be left to the judgment of the person who has the management of them. He ought to have intelligence enough to know if any plant is suffering from want of water.

The Bronze and Gold Zonal Pelargoniums require different management through the winter months. As they are of a much more vigorous habit of growth than the Tricolor sorts, they may be kept growing all through the winter months. This gives them a great advantage over the Tricolor varieties, for where a large stock of them is required they may be propagated throughout the winter. They will grow very freely in a temperature of 75°, and as the spring advances they will bear a temperature of 85° without showing any ill effects, and cuttings taken from them when they are growing in a high temperature strike in a very short time with little trouble—merely putting them in single thumb-pots and standing them on shelves or eurbs. As an instance of this, I may state that since I exhibited Beauty of Calderdale and Beauty of Ribblesdale at the Royal Botanic Society's Show, on the 3rd of July last, I have propagated from each plant upwards of five hundred. The plants were placed in the Pine-stove early in July, and have produced a crop of cuttings every week since. They are now as strong and vigorous as ever. They are watered about once a week with guano water. The young plants propagated from them are models of health and beauty. I predict for these a brilliant future, and have no doubt that more plants of them will be propagated within the next five years than of any varieties of Pelargoniums previously sent out.—J. WILLS.

ORCHARD-HOUSE MANAGEMENT.

BEING called upon by Mr. Rivers to say what I meant by my deviation from his directions as to orchard-house management, I would in the first place express my regret that I did not before state that I had seen only the eleventh edition of his "Orchard-House," printed in 1863, and my deviation has been from the rules laid down there. Very possibly the rules now laid down are modified so as to resemble those by which I have myself this year been guided.

1st, Each year I have taken less soil out of the pot at the autumn top-dressing.

2nd, I entirely discontinue morning syringing, and in dull weather I avoid syringing at all.

3rd, I ventilate far less freely than I did at first—at least, until the fruit is far advanced.

4th, I allow the shoots to grow much longer before I stop them, and I find them much stronger in consequence.

5th, I never raise my trees from the borders during the summer; they root into the borders as they please.

6th, I give far less water than I understood to be recommended by Mr. Rivers. I never water till the trees begin to flag.

7th, I have found the lime and sulphur, as directed to be used in the "Orchard-House," quite useless. I now use either "hot sewage" or the boiled lime and sulphur (1 lb. of each to one gallon of water), a quarter of a pint to four gallons of hot water, and find I can keep down red spider.

These are, I think, my main deviations, and I feel that they justify the expression I used—"that I cultivate my trees with considerably less trouble than the rules advise, and that each year I have departed from those rules with manifest advantage." I would renew my expression of sincere respect to

Mr. Rivers as the founder of the whole delightful system of orchard-house culture.

Perhaps some of your readers may like to hear the actual result of my small house this year. Twenty-one Peach trees, of which two were blank, both Early Victoria, gave me 270 Peaches. Ten Nectarine trees gave 220 Nectarines. Nineteen Plums gave 162 fruit. Total, fifty trees, 961 fruit. I have counted none but really good fruits. The size and flavour were all I could wish, and my many visitors agreed that they had neither seen nor tasted better anywhere this season.—C. P.

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 15TH.

FRUIT COMMITTEE.—G. F. Wilson, Esq., F.R.S., in the chair. On this occasion Mr. Ward, gardener to T. V. Miller, Esq., Bishop's Stortford, sent three fine, handsome Smooth Cayenne Pines, weighing severally 104, 10, and 93 lbs. They were awarded a special certificate. Mr. Whiting, of The Deepdene, Dorking, exhibited fruit of Croft Castle Pear, British Queen, excellent, and with that fine, sprightly flavour peculiar to the Windsor, and Beurre Hardy, excellent in flavour, confirming the high character of this variety. Henry Webb, Esq., Redstone Manor, Redhill, exhibited specimens of several varieties of Pears to show the effect of the past season on the ripening of the fruit, some of which were cankered, and others much cracked. Mario Louise seemed to have suffered from the frost and cold nights so prevalent last summer; Beurre Diel was very much cracked, and Doyenne Blane had been much cracked, but recovered after the tree had received a liberal supply of water, confirming the statements made in the interesting article by "C. I. M." in last week's number. Mr. Cox, of Redleaf, remarked that fruit shadowed by the leaves never cracked, while all the exposed fruit were so. Mr. Wells, of Southend, Essex, sent a basket of very fine bunches of Black Hamburgh Grapes, grown in the ground vineries, and which were equal in size and colour to what are usually grown in vineries. He also sent bunches of Muscat of Alexandria, perfectly ripe and well-colored, grown in the same structures. The Committee awarded the Grapes a special certificate, and a high commendation of the principle of the ground vineries, by which Grapes may be grown in ordinary gardens at a small cost.

Mr. Bye, gardener to R. Arkwright, Esq., Hampton Court, Leominster, sent a seedling Nut, which was no improvement on existing varieties. Messrs. Downie, Laird, & Laing, of Staunton Park, sent a seedling kitchen Apple, raised at Luchie, East Lothian. Mr. Aldred, 22, Bridge Street, Kilburn, sent a seedling Apple, called Aldred's Seedling, which was so much of the character of Waltham Abbey Seedling and Golden Noble, that it was not considered to be sufficiently distinct.

Mr. Penfold, gardener to J. Cockle, Esq., M.D., The Lodge, West Moulsey, sent fruit of a white-spine Cucumber, which was not considered to possess any merit. Mr. A. Colbourn, gardener to J. Blyth, Esq., Woolhampton, sent a dish of Salway Peaches, large and handsome, and of pretty good flavour; they were from a tree planted inside a house 26 feet long by 16 feet wide, and this year it has borne about 270 fruit, and most of them of very large size. Mr. Rivers, of Sawbridgeworth, sent fruit of a seedling Peach, raised from the Heath Clingstone, with the following communication:—

"For the curious in such matters, I send two Pavies, the sort a seedling, raised from that favourite late Peach (with the Americans), the Heath Clingstone, which it resembles. Downing calls the Heath 'the most superb and delicious of all the Clingstones.' In 1865 the sort now sent was a mass of syrup. This season has not been warm enough; still, the flavour is remarkable from the perfect absence of the prussic acid smack. These white Pavies may be kept the greater part of November on the trees and in the fruit-room, and are very ornamental for the dessert."

The Committee was of opinion that the fruit is not calculated to ripen sufficiently in this climate; but if grown in heat we have no doubt but it would be excellent, it having all the elements of a good fruit.

The Rev. George Kemp, of Sevenoaks, brought a dish of Dunmore Plums, which had hung on the tree till they shrivelled, and the flavour was sweet and excellent. This is a most excellent Plum, and at this season will keep three weeks after being gathered. Mr. Kemp stated he had the fruit in the dessert in December. From the garden of the Society a collection of Tomatoes, fruit of the Pear-shaped Service, and Gros Colmar Grape were exhibited. Miss Fothergill, Somerset House, Old Shirley, Southampton, sent a drawing of several varieties of Apples, which showed an indication of talent in the delineation of fruits, which if prosecuted will doubtless lead to success. Mr. William Paul, of Waltham Cross, exhibited an interesting collection of very correctly named Apples and Pears.

Mr. Bye, gardener to R. Arkwright, Esq., sent some fine specimens of White Spanish Onion, and Mr. Lidgard, of Hammersmith, received a special certificate for a very meritorious exhibition of Celery, which form a great attraction to the visitors. It consisted of Dewar's Northumberland Champion, Cole's Superb Red, Wall's Invincible, and Manchester Solid Red. Mr. Lidgard also received a special certificate for fine examples of Onions, consisting of Daavers, New Venetian Giant Tripoli, and that called the Naneham Park.

Mr. Rivers sent examples of the stocks used for dwarfing the growth of the Apple tree. They were:—

"No. 1.—The French Dencin, on which Apples grow very well, but it does not keep up (*i.e.*, swell) with a vigorous-growing sort. No. 2.—The Broad-leaved Paradise, an English stock, raised here (Sawbridge-worth) from seed. This sort roots freely at the surface, swells with the graft, and makes healthy productive trees. No. 3.—The Nonesuch Paradise, an English stock, raised here from (it is supposed), the Nonesuch Apple. Like No. 2, it roots freely at the surface, swells with the graft, and forms healthy productive trees. It retains its leaves, and grows freely till late in autumn. It strikes freely from cuttings, and is found to be a distinct and valuable stock."

FLORAL COMMITTEE.—The scarcity of plants exhibited this day reminds us of the close of the floral year. Until the Chrysanthemums display their beauty—if, indeed, they will do so this late season—a gay gathering of flowers and plants cannot be expected. There were, however, some interesting subjects. Mr. Anderson, gardener to T. Dawson, Esq., Meadow Bank, near Glasgow, sent a small collection of cent Orchids, very beautiful. Among them were *Cattleya labiata* Pescatorei; *Oncidium cruentum*, *O. reflexum*, *O. encallitum*, and *O. microchilum*. Mr. Bowie, Chillingham Castle, sent a seedling *Lobelia* called Little Gem, a plant of very compact free-flowering habit, with white and pale blue flowers. A first-class certificate was awarded it as a useful bedding plant. Mr. J. Watson, St. Albans, exhibited two baskets of small plants of his *Pelargoniums* Miss Watson and Mrs. Dix, which were struck ten weeks ago. They were sent to show the good constitution of the plant. He also sent a seedling Bronze Zonal variety called Bronze Jewel. From Mr. J. Stevens, Ealing, came Tricolor *Pelargoniums* Mrs. Stevens and Ealing Rival; the latter, a bright and distinct sort, received a first-class certificate.

Mr. W. Bull contributed *Encephalartos lanuginosa*, a distinct and handsome species, for which a first-class certificate was awarded; *Saxifraga Fortunei*, a hardy *Saxifrage*; *Aucuba japonica* *vera marmorata*, a variety with beautifully variegated leaves, which also received a first-class certificate; *Adiantum* sp., to be sent again; *Polystichum angulare cristatum*—first-class certificate; *Lastrea Filix-mas crispa gracilis*—first-class certificate; *Athyrium Filix-femina pulcherrimum*—first-class certificate; *Athyrium Filix-femina fissidente excurrens* Lyelli, and *Polystichum angulare lineare*—first-class certificate. This, as well as all the other varieties which received certificates, was distinct and good. Mr. Bull also took a first-class certificate for *Aucuba japonica femina grandis*, with bright, broad, green, glossy foliage, and very handsome.

Mr. J. Aldred, Kilburn, sent four seedling Tricolor *Pelargoniums*, all of them promising varieties—*Mimosa* was much admired; but being seedlings, no award could be made. *Spitfire*, *Beauty of Kilburn*, and *Victory* were the other varieties. Mr. Walsh, Hillingdon, sent three seedling Tricolor *Pelargoniums*, all of great promise. Mr. Bye, gardener to R. Arkwright, Esq., sent cut specimens of a showy herbaceous *Calceolaria*, yellow ground with deep crimson spot. Plants of this seedling must be seen to ascertain its habit and merits. Mr. McDonald exhibited fruits of *Passifloraerulea* *Neumannii*, smaller than the old *Passiflora* fruit. A collection of Orchids came from the gardens of the Society, consisting chiefly of *Odontoglossum grande*. One plant was so particularly well grown and covered with its gorgeous flowers, that a special certificate was awarded it.

Mr. Bull exhibited several plants, among them *Trichinium Manglesii*, a curious flowering plant, very pretty in its way. Coloured drawings of *Pelargonium* leaves, *Lilium auratum*, and a group of plants, together with several specimens of Apples, were placed before the Committee for their inspection. These drawings, the production of Miss Fothergill, of Old Shirley, Southampton, are of great merit. We especially admired the group of Bronze Zonal *Pelargonium* leaves, grown by Mr. Wills, for the truthfulness of their execution. Miss Fothergill has been a careful student of Nature, and promises to evince much talent. We hope her first attempts may be carefully followed up and attended with success. There is a wide field open for artists in flower-drawing at the present day.

CALCEOLARIA CULTURE.

I CANNOT help thinking that the plants to which "ROBIN ROVE" refers at page 274 as being grown in a two-light frame, must have been sadly deficient of soil about the roots during their removal; and as to the dry weather affecting them, surely your correspondent must have been very badly off for water, or else have failed to apply it in a proper manner. I venture to assert, if plants treated in the manner I advocate, and possessing the balls of earth and roots which they ought to do, are carefully planted and well watered once or twice according to the state of the weather, they will, on being examined a week afterwards, be found to have plenty of fresh-made roots. Certainly, if the weather is very dry and hot, the plants will droop slightly, but not in a manner to affect their well doing. "ROBIN ROVE" need not fear to use leaf mould, if it has sufficient age, and if he refers to my first remarks he will see that when the plants are fairly at work in the spring they are in a

soil which cannot be objected to on the score of lightness.—
EDWARD LUCKHURST, *Egerton House Gardens, Egerton, Kent.*

NUNEHAM PARK,

THE SEAT OF THE REV. W. VERNON HARCOURT.

On the 26th of September I was awakened at daybreak by the old church chimes of Woodstock, and before many people were up I had turned out from a Great Western Railway carriage at the Culham station, and was on my way to Nuneham Park. The sun was shining brightly, and the lark at "heaven's gate" was carolling its sweetest, causing me to make sundry halts to listen; sometimes, also, I stopped to observe the goodly timber trees richly furnishing the undulating park, or an occasional happy family of deer and cattle browsing or reposing together, chewing the cud of intense quiet and enjoyment. Poor dumb creatures! with those great honest eyes and that steady gaze, one might, by a slight stretch of fancy, endow you with thought.

An excellent carriage road between two and three miles from the station led me to the stable-yard, with the mansion inclining to the left. The house of Mr. Stewart, the gardener, being to the right, thither I directed my steps. Entering the garden through a door in the Ivy-covered wall, a very good cottage in the modern Elizabethan style, and covered with the blue *Wistaria*, *Clematis*, &c., presented itself, and speedily its worthy occupier, with a hearty shake of the hand, introduced me through its portal. Soon issuing again from the back of the residence we passed the frame-ground, concealed by a wall covered with Ivy to the right, and on the left the tall boundary or west wall of the garden, also at this part similarly covered, and came to the north wall, against the south face of which is situated the *Pelargonium*-house. This was, for the time, employed in forwarding successions of a great number of flowering plants for decorating the rooms of the mansion during the autumn and winter months. From it admittance is afforded by a glass doorway into the Orange-house, which is filled with hardwooded plants during the winter; but at the time of my visit it contained a multitude of fine-foliaged and other plants, conspicuous amongst which, trained up and over the arched ironwork which supports the heavily constructed timber rafters, were *Passiflora edulis* and *Lapageria rosea* in fine blossom. *Mandevilla suaveolens*, deliciously fragrant and most beautiful, covered the back wall. The stove succeeds next. It is crammed with plants such as *Cyanophyllum magnificum*, *Clerodendron Thomsonæ*, *Balfourii*, and *Crotons*, with a number of fine-foliaged plants grown to a particular medium size to suit vases for dinner-table decoration. Petrified gravel is disposed as rock-work, and serves admirably to trail many a trailing plant on.

Before I proceed farther I must mention that Mr. Stewart had to make shift and crowd his plants anywhere, as, in lieu of flues, these houses and the vineries were about to be fitted with pipes. Two of Marriot's tubular boilers were to be employed, one boiler only to be worked at a time, the other being kept in reserve in case of accident. One boiler will have to do duty for the four houses above mentioned and for four vineries, through the agency of 1800 feet of four-inch pipes—three flows, three returns, and two back mains, thus doing away with seven fires and two boilers as at present constituted. An excellent kind of screw valve was pointed out to me, nearly on the same principle as Beck's, but much smaller; it was to be fixed in the flow-pipe of each house. The valve is on such a principle that it cannot go wrong, and the heat of each house can be easily regulated by it to a nicety and to a certainty. I could not learn whose patent or invention it was. I should have said nine instead of eight houses; for here, at right angles with the stove and first vinery, is a span-roofed Heath-house, which the boiler is also to heat by a flow and return three-inch pipe all round.

Entering this house, among other things there I found a box of young seedling *Pelargoniums* just in their first leaves—some of them showing unmistakable variegation already, others quite green, and others, again, quite white. The last are of no account, for they become poor, weakly, sickly plants, never worth keeping. I can speak from experience, for I have dabbled in this way myself, and not with *Pelargoniums* only; but I invariably destroy unless satisfied the seedling is of a proper strain, and better than anything yet sent out. I think I have now obtained a seedling *Pelargonium* by crossing *Scarlet Perfection* and *Christine*, and of its kind the best. Mr. Stewart's seedlings are the result of crossing *Madame Vaucher* with *Pink Stella*, and *Italia Unita* and Mrs. Pollock with

Madame Vancher. Mr. Stewart has arrived in his practice at the conclusion that nothing but varieties of distinct colours and of good constitution will do; and I have seen many illustrations that indiscriminate crossing with Versicolours results in splashed productions, which will remain to worry and tantalise for two, three, or more years, and then have to be thrown on the rubbish heap. Nevertheless, some of Mr. Stewart's seedlings could well hold up their heads side by side with many, very many, that I have seen shown. Varieties of *Amaryllis*, trained exhibition plants, &c., filled up this house for temporary convenience.

Between the stove and first vinery the intermediate space is unglazed, and here the stokehole is entered; after examining the sites of the new boilers, I went through the vineries, one after another. Those who have had deep trenches cut out at the back to the full lengths of their vineries, when fruit is ripe, and rows of pipes fixed at the sides and front upon the borders, need scarcely be told the state of anxiety in which Mr. Stewart was, nor of the various muslin and canvas contrivances which he had in use to keep the resulting dust and dirt from the Grapes. These inside borders had been made uncommonly well, as where the trenches were dug out for the return-pipes, the soil was of a friable, light texture, and thoroughly intersected by fibrous roots. This vinery, being nearest the boiler, is the early house, and was occupied with Muscat of Alexandria, Canon Hall Muscat, and West's St. Peter's Vines. I observed that Mr. Stewart wisely advocates the outside borders from their flank extremities being aired, and the inside space at the same time supplied with air by means of glazed sewage-pipes sunk 2 feet deep, and about 2 yards apart, rising with bent elbows just within the house, between the hot-water pipes and the wall plates in front. The houses themselves are not very modern, plenty of timber entering into their construction.

Passing through a glass partition I entered a compartment devoted to Black Hamburgs, and then a house occupied with very old Vines of the same ever-useful Grape, but these after bearing next April, are to be rooted out to make way for young Vines. The next and last of the houses of this section is very interesting. The roof is now covered with fine two-year-old Black Alicante, Tottenham Park Muscat, and Lady Downe's Vines, six in number, and the sorts placed alternately. Mr. Stewart has a very high opinion of the Black Alicante. He has cut very fine bunches of it this season, and those which I tasted were certainly bordering on first-rate, and but for the improvements going on would no doubt have been quite so. One of the finest symmetrically-trained Fig trees I ever saw, a White Marseilles, 63 feet in length, by 12 feet high, covers the entire back wall of this late vinery. The foliage was ripening off in perfect health, and the tree had carried its second crop by bushels. It is generally started about the 1st of December, and by about the 1st of March the Figs have arrived at that stage—say the blossoming period, when a pin may be admitted down the centre of the Fig easily, and without injury. Then, on their account, is the time, for a while, to maintain a dry atmosphere. This house is during the winter and spring principally devoted to Dwarf Kidney Beans, and in the meantime the Vines are laid down horizontally along the front enclosed in dry straw, and wound with dry haybands, which are kept dry. Until about the 1st of March, when root-action naturally begins, Mr. Stewart is quite contented to allow the Vines rods to repose air-tight in their dry envelopes; until root-action begin, whatever may be the atmospheric temperature, the Vines do not attempt to break. I quite envy him this house and its products.

It was most pleasing on quitting this vinery to look upon a long continuation of the south wall to the bottom of the garden covered with Pear trees in luxuriant health, and bearing fine fruit. I well remember the fine Pear wall at Frogmore, but this pleased me better. The trees are chiefly trained horizontally, occasionally with weeping cordons (as I call them) in the intervals—that is to say, a stem is allowed to grow to the top of the wall, clean and straight as a ramrod, then made to strike off right and left like the letter T, having four pinched-in branches grown equidistant at right angles downwards to the bottom of the wall. I need not dwell upon the sorts: they consist of Duchesse d'Angoulême, Marie Louise, and the best of the early Pears. The south border here is chiefly occupied with plants of Keens' Seedling and President Strawberries, which were forced, and planted out merely to produce one more crop next spring about ten days earlier than those in established beds. The open quarters in this division of the garden are chiefly cropped with exceedingly fine Celery, in rows quite 5 feet apart,

so as to allow of the Pears becoming the next occupants on their exact sites. Espaliers and weeping pyramidal Pear trees take positions alternately in parallelograms by the sides of the walks, and are this year without a crop of fruit, as at other places generally.

The west wall for its entire length along the bottom of the garden, may be said to be devoted to Plums of the best kinds, and the wasps were carrying havoc amongst them, although many of Mr. Fish's double garden-hand-light traps were placed to decoy them to destruction.

The north wall of this compartment is furnished with White Dutch Currant, and Ruby Castle Red Currant, in cordons, and bearing quantities of very large fruit. Mr. Stewart said that they never thought of giving up Currant and Raspberry tarts until Christmas. This north border is occupied with bedding-out plants for the spring decoration of the flower garden. These were here chiefly seedling Polyanthus and Pansies, white, blue, and yellow; but the cuttings of the latter sort distinguished themselves by a sort of mildew-like damping-off this year, which is puzzling. About half way up this north wall, and leaning against it, is situated the Fern-house, containing a good collection in perfection, the Maiden-hair Fern showing most conspicuously, as it is required most for bouquets and other garnishing purposes. A sprinkling of orchidaceous plants is also here, constituting the advanced guard of an oncoming collection, when the new heating arrangements are completed.

Running in an easterly direction and striking across towards the vinery borders, is a wall forming the back of the wheelbarrow shed, and against it is a tree of *Calebasse Grosse Pear*, bearing an enormous crop of its immense fruit; then turning sharp again to the left, against a north wall I found an open shed roofed with glass, where are temporarily deposited *Camellias* with the plumpest of buds, *Azaleas* with the hardest crowns, and *Heaths*, *Epacris*, *Coronillas*, *Cytisuses*, and hardwooded plants, together with old named varieties of *Cinerarias*, to blossom at Christmas. There were also lights containing numerous seedling *Cinerarias*. Along the edge of the Vine borders I noticed a choice collection of *Pablias*, a few of which I will describe as being the most select. These were *Heracles* (Fancy), a large showy flower for a bed at a distance; *Mrs. Savory*, a slight violet-tipped flower; *Glory*, a better flower than *Mrs. Savory*, with the ground colour of the latter, without being tipped; *Hero*, of a peculiar, perhaps a dingy buff, with a pretty violet centre; *Prospero* (Fancy), deep peach blossom, very good and pretty; *Queen of Primroses*, a good flower, and pleasing as its patronymic; *Epaulette*, a yellowish buff variety; *Golden Admiration*, the best of all the goldens; and a new seedling *Fancy*, raised by Mr. Stewart, and on which I afterwards congratulated him when I saw it in the flower garden, as it will, I think, be considered first-rate. To enter upon colours without a lady at one's elbow is a desperate venture, but I will say that I consider the ground colour is a magenta suffused with pink, and the petals rayed with unconfused dark crimson stripes.

Returning to the Fern-house I entered a yard, wherein, and along the continuation of the north wall, were the *Camellia* and *Azalea*-houses, then empty and undergoing the operations of cleaning and painting. Pits and frames, also, in this yard contained *Pelargoniums*, of both new and old kinds, training in preparation for exhibition; also *Telegraph Cucumber*, the old smooth-skinned, and the newer, rougher and better variety of it. Mr. Stewart observed, that for the last nine years he had been in a position to cut a Cucumber every day.—UPWARDS AND ONWARDS.

(To be continued.)

PLANTING A SMALL TOWN GARDEN.

I AM confined by illness to my room looking on a small garden behind my house some 50 feet square. It possesses a fine Almond tree, a rockery, some small Hollies, and a closed tool-shed, but is now an uneven erocket lawn. I have had large gardens in the country, but till now have never had a small garden, or one in London, for I live in the south-west neighbourhood of Hyde Park; the soil is gravel, the situation remarkably open and airy, and I have not seen a single smutty leaf from my garden. The few herbaceous plants in the border thrive well.

I want to make my little garden a little gem of brightness, and as fragrant as bright next spring, and I want to know how to begin and what (and when) to plant. What Ferns would do

well in such a spot? I am especially anxious to know what *Rosea* will do best, and to know how to proceed for next year's blooming; but beyond *Rosea*, though I must have some summer flower-beds, my chief object is spring flowers and shrubs for April, May, and the early part of June. The garden is behind the house, which stands N.W.W. My only conservatory is also a study, though it has lights on three sides, most to the north, and it is heated by water in winter; but I must trust to plant-cases for my forcing. Will the present heat of this glass room bring on Violets and the like?—AN OLD SUBSCRIBER AND LAME GARDENER.

[We regret that the want of anything like a plan renders us unable to tell you how to make the most of your 50-feet-square garden—that is, we presume, the side is 50 feet in length behind the house, and more especially as we hardly know the exposure of the garden. In the meantime, as herbaceous plants and shrubs thrive well in your suburban district, we will unhesitatingly recommend the following for making your garden gay in April, May, and June, and yielding fragrance as well:—

Herbaceous Plants.—Daisies of all colours, Hepaticas of kinds, Polyanthus of all colours, Primroses; Violets, single and double; Heartsease, Anemones of kinds, Saxifrage of kinds, *Orob. vernus*, *Asperula odorata*, *Corydalis lutea*, *Arabis*, white, purple, and variegated; *Helleborus niger* and *fetidus*, and *Soldanella alpina*, which will be in bloom in April. To be followed by *Epimedium alpinum*, *Saponaria ocyroides*, *Ajuga reptans*, *Armeria* of kinds, *Dielis* *formosa* and *spectabilis*, *Dianthus*, *Potentilla* of kinds, *Ranunculus*, *Mimulus moschatinus*, and others; *Abutilum*, Evergreen Candytufts, *Tradescantias*, *Pæonias*, herbaceous and tree, *Veronica* of sorts, *Aquilegia* (*Columbine*), *Iris*, spring-flowering; *Papaver*, *Cerastium tomentosum*, *Valeriana rubra*, *Aconitum napellus*, *Digitalis*, *Lysimachia verticillata*, *Thalictrum*, dwarf kinds; *Campanula carpatia*, *Gentiana acanthis*, and others.

Annuals.—By sowing now in a greenhouse, by sowing in the ground in September, or early in March, and defending the patch a little by a reversed flower-pot—*Abronia umbellata*, *Calliopsis bicolor*, *C. atro-sanguinea*, *Campanula speculum*, *Clarkia pulchella*, *Collinsia bicolor*, *Erysimum Peroffskianum*; white, lilac, and crimson Candytuft; *Mignonette*, *Silene pendula*, *ruberrima*, *Shafta*, *atocion*, &c.

Bulbs.—The best plan would be to obtain red, white, and blue *Hyacinths* by the hundred or fifty, instead of buying the finest sorts at 1s. or more per bulb; and these cheaper bulbs at from 25s. to 30s. per hundred will make a fine show in the garden. If they cannot be planted soon in well-stirred soil, they had better be put on a hard surface and covered with rough soil and leaf mould, and be planted with balls afterwards. Next to these for blooming, we would place single and double *Anemones*, at so much per hundred, which will cost about a fourth of the named kinds. Then for early flowering, there should be a lot of *Winter Aconites*, *Snowdrops*, and the beautiful *Crocus*, of all colours, most of which can be obtained at from 2s. to 3s. 6d. per hundred, according to quality and novelty, to be followed by the early and late, and single and double *Tulips*, *Polyanthus Narcissus*, &c., and yellow and scarlet *Turban Ranunculus*.

Shrubs.—Besides the *Laurustinus* for a small garden, we would try in such sandy soil the hardier section of *Rhododendrons*, and some of the following evergreen shrubs:—*Erica carnea*, *Daphne collina*, *Vinc. major* and *minor*, *Daphne laureola*, *Ulex* (*Double Furze*), *Andromeda latifolia*, *Berberis glumacea*, *Cotoneaster buxifolia*, *Olea angustifolia*, *Arbutus lucida*, *Cytisus scoparius* (*Broom*), *Berberis fasciculata*, and two or three *Cypresses* and *Junipers*.

Of deciduous shrubs, these may have a place in the shrubbery—*Amygdalus nana*, *Cydonia japonica*, *Daphne mezereum*, *Ribes sanguineum*, *Spiræa Lindleyana*, *Tamarix germanica*, *Hypericum calycinum*, *Genista triquetra*, *Honeysuckles*, &c.

Roses.—We would at first trust chiefly to China varieties, as the common *Belle de Florence*, *Abbé Miolard*, *Cramoisi Supérieure*, *Fabrier*, *Mrs. Bosanquet*, &c. These will bloom far into the winter in mild seasons, and keep on all the summer. To these we would add such Perpetuals as *Baronne Prevost*, *Beauty of Waltham*, *Caroline de Sansal*, *Général Jacqueminot*, *Jules Margottin*, *William Jesse*, and *John Hopper*.

With a plan and dimensions of borders and beds, it would be seen how many of these you could plant. A dozen of *Crocuses* may go in a square foot, or even three dozen; large bulbs, as *Hyacinths* and *Narcissus*, would require from 9 inches to a foot. We shall be happy to give definite information on any point

when desired. Meanwhile, though we cannot specify by name those who would give honest plants for moderate prices, we do believe that every one of the nurserymen in your neighbourhood would do his best for you if he knew what you wished to spend on herbaceous plants, shrubs, and *Roses*. In nineteen cases out of twenty this will be found the most advantageous for all parties.

We have not noticed *Wallflowers*, as it is now too late to sow for next spring's blooming, but you might obtain some hundreds of plants from some of the market gardens for a trifle, and they make a place almost too sweet in spring. *Mignonette* could be sown now or after the new year, in the conservatory, and turned out in May so as to bloom early. The conservatory might be rendered gay all the winter with *Camellias*, *Epacris*, winter-blooming *Heaths*, Chinese *Primulas*, *Violets*, &c., and if all the space is not wanted for these, a place may be set aside for keeping small plants of *Pelargonium*, &c., to go into the beds, when the blaze of bulbs is over. We do not see, however, how you can do such things and still retain a croquet ground.

To be looked at from the window, we should prefer, if the ground admitted of it, an irregular border all round except at the entrance, and the beds on turf in the middle. To have the greatest enjoyment from being able to go into such a garden at all times, we would have no turf, but have the beds on gravel with neat tile edgings, and then, unless when there was a down-pouring rain, the garden would be always accessible. The little lawn or grass plat, as a means of walking between beds, is often a great drawback to beauty, because not well kept, which it rarely is when not gone over three times in a fortnight. Even an invalid may pull a weed out of, or use a broom on a gravel walk, who cannot do anything to keep grass short.]

THE THOMPSON TESTIMONIAL.

It is now some time since this laudable object was brought before the public, and although it has already met with a considerable measure of success, the result has as yet fallen far short of the reasonable expectations entertained by the Committee at the outset. Various causes have contributed towards this state of things. The testimonial was started at a season of the year when those who are most likely to contribute were on the wing for health and recreation; and many who were desirous of testifying their appreciation of the laudable object held back, in doubt as to what amount they were to contribute till they knew what others intended to do.

The time has now arrived when both of these obstacles may be removed. Health and pleasure-seekers are now settling down to the quiet of the home circle, and of these a large proportion of them to the enjoyment that the garden and their gardening journal afford them. Let them, then, think tenderly and lovingly of those who have contributed so much to their pleasures, and especially on those in the down-hill of life, after the best of their days spent in their service. Of none can they do so more fittingly than him on whom it is intended to bestow this testimonial. Let it be in reality a testimonial—a thank-offering for benefits received, and a testimony to the character of one whose unblemished and guileless life and industrious career have ever maintained him high in the estimation of all who knew him, and whose services to the horticulture of his time have secured him the admiration of those who knew him not.

There is one class to whom we would more directly appeal, because it is they who have more directly benefited by what Mr. Thompson has done. We mean the purely professional gardeners. When we pass our eye down the list of the subscribers we are disappointed to see so few of this class. We are well aware that it is not from any indifference that they do not contribute what it is in their power to do; but we believe it is from a feeling that the amount they can afford is so small it cannot easily be contributed, or if sent it would not be appreciated. Let them banish such a thought. The first half-crown received came in the form of postage stamps, in an envelope sealed with the impression of a sixpence. It was from a garden lad, and he said, "I send this for Mr. Thompson's testimonial. It is all I can afford, but I know I owe him much more than that for all the good I have got from his writings." "And," says another, "I send you a trifle to help to soothe the path of the veteran gardener in the last days of an honoured life." What eloquence of the heart do these "trifles" carry with them! It is these we delight to see, and

we trust the head gardeners in all the large establishments will afford their young men an opportunity of joining in this good work by organising a mode such as has been adopted by Mr. Wills, of Huntroyde Park, who has applied to it all the energy which he displays in whatever he undertakes. This is how Mr. Wills has done it:—

"Huntroyde Gardens, Burnley, Lancashire.
16th Sept., 1867.

"DR. ROBERT HOGG,

"Dear Sir,—I have very great pleasure in sending you a trifle from myself and the young gardeners and labourers employed at Huntroyde. Several of the young men have generously given a day's pay, others have given what they could afford towards Mr. Thompson's testimonial.

"I was exceedingly pleased at the kind wishes for Mr. Thompson's future happiness which accompanied their gifts, and at the willingness they displayed in contributing towards this excellent mark and manner of recognising the valuable services rendered to horticulture by Mr. Thompson. I earnestly hope the young gardeners employed on every other establishment throughout the three kingdoms will follow the good example set by the foreman, young gardeners, and labourers employed in the gardens at Huntroyde; and that head gardeners will do all they can on their own part, and by recommending those employed under them to follow their good example. Earnestly hoping Mr. Thompson may long live to enjoy what is now being subscribed for him, believe me, yours very faithfully,—JOHN WILLS."

LIST OF SUBSCRIBERS.

	£	s.	d.		£	s.	d.
J. Wills	1	1	0	W. Fish	0	2	6
S. Craven	0	5	0	J. Holding	0	2	6
C. Patrick	0	2	6	H. Bertwhistle	0	1	0
J. Hitchon	0	2	0	J. Cunningham	0	1	6
W. Doy	0	2	6	J. Whitehead	0	1	0
D. Knight	0	2	6				
R. Jones	0	2	6				
				Total	2	6	0

We might give a long list of names of our leading gardeners who could help on this laudable project, but it would be invidious to do so. We leave it in their hands, and commend it to their own warm hearts, which are ever open to assist in any good work. We hope ere many days are passed to hear of many who have followed Mr. Wills's example, and Dr. Hogg will have great pleasure in receiving their contributions. We shall conclude with the following extract from the prospectus issued by the Committee:—

"With a modesty peculiarly his own, and with a degree of plodding perseverance which cannot be too highly recommended as an example to the rising generation of horticulturists, Mr. Thompson has worked on at these, his favourite pursuits, with zeal and assiduity, setting before himself the object of rendering service to science rather than that of personal gain; and now, after a long and useful career, when his physical powers begin to fail him, it has been thought that an expression of public sympathy in acknowledgment of his life-long labours, would serve to gladden and solace the remaining years of his life."

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

LÆLIA MAJALIS (May-flowering *Lælia*).—*Nat. ord.*, Orchidaceæ. *Linn.*, *Gynandria Monandria*. Native of Mexico, where it is popularly known as "The Flower of May." Flowers lilac; lip white, margined and spotted with lilac.—(*Bot. Mag.*, t. 5667.)

ECUMEA OLOMEIATA (Crowded-flowered *Ecumea*).—*Nat. ord.*, Bromeliaceæ. *Linn.*, *Hexandria Monogynia*. Native of Bahia, in Brazil. Flowers scarlet and purple.—(*Ibid.*, t. 5668.)

RONDELETIA PURDIEI (Mr. Purdie's *Rondeletia*).—*Nat. ord.*, Rubiaceæ. *Linn.*, *Pentandria Monogynia*. Native of Venezuela, and New Grenada. "A free flowerer, and very fragrant." Flowers pale yellow.—(*Ibid.*, t. 5669.)

THAPSLA DECIPENS (Madeiran *Thapsia*).—*Nat. ord.*, Umbellifloræ. *Linn.*, *Pentandria Digynia*. Native of Madeira. Flowers white and fragrant.—(*Ibid.*, t. 5670.)

EPIMEDIUM ALPINUM var. RUBRUM (Red-flowered Barrenwort).—*Nat. ord.*, Berberidaceæ. *Linn.*, *Tetrandria Monogynia*. "A very elegant, hardy, herbaceous plant, equally suited for the shady border or rockwork, and for early greenhouse decoration." Flowers straw-coloured, bordered with crimson.—(*Ibid.*, t. 5671.)

HIPEASTRUM PARDINUM.—"This magnificent species of *Amaryllis* is one of the most striking novelties of the past season, perfectly distinct from all the species of *Amaryllis* previously known, and remarkable alike for its form, which is spreading, with scarcely any tube, so that the whole inner surface is displayed to view; and for its colouring, which reminds one of the spotted varieties of *Calceolaria* or of *Tydaea*,

so closely are its perianth segments covered over with small dots, more or less irregularly confluent, of crimson red on a creamy yellow ground. So distinct a plant, combining as it does great beauty with its distinctness, cannot but be a valuable acquisition for our gardens.

"The plant is a native of Peru, and was introduced from thence by the Messrs. Veitch & Sons, of Chelsea, through their fortunate collector, Mr. Pearce. It was exhibited in bloom at one of the meetings held during March of the present year, and was much and deservedly admired. Its merits were marked on this occasion by the award of first-class certificate, which was in every way deserved. Every grower of hothouse bulbs must secure it for his collection.

"Our memoranda, taken from the blooming plant, describe the leaves as broadly linear, somewhat blunt, and about 1½ inch broad. The flower-stem is robust, terete, and glaucous, supporting two flowers, which issue from a spathe of pallid oblong-lanceolate bracts, and are supported on pedicels of about 1½ inch long. The flowers are widely expanded—6 to 8 inches broad; the tube very short, and fringed within; the sepaline segments ovate oblong, apiculate, the petaline similar, but blunter, all greenish at the base of the tube, yellowish white upwards, and there spotted thickly with crimson dots; the stamens declinate, with red filaments and green anthers.

"Being a native of Peru, this species will not require excessive heat; a cool stove treatment will be best for it. In other respects its culture will be similar to that of other stove *Amaryllids*, some of which were recently noticed in our pages."—(*Florist and Pomologist*, vi., 213.)

ZONAL PELARGONIUM AMY HOGG.

THE innumerable new bedding-out *Pelargoniums* that are being sent out, I fear will puzzle many of your amateur readers in selecting, and, as a consequence, either they will keep to the old sorts, or be too often disappointed in the new varieties which they order. To aid those who may be in this difficulty, allow me to recommend, with unqualified approbation, a comparatively new *Nesegay* variety, *Amy Hogg*. The leaf has a rather dark zone; the flower is in colour of a bright purplish rose, very distinct, well formed, and thrown well up above the foliage. The flowers are as numerous and as large as in any *Pelargonium* I know, equal to those of the good old *Cybister*, and immeasurably superior in shape. If your amateur readers obtain some stock plants to increase from in spring, or order some at the usual time of bedding-out, I am sure they will be gratified, and possibly thank—AN HONORARY SECRETARY.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Cabbages, let a good breadth be pricked out at once in rather poor ground. *Celery*, earth-up. *Cauliflowers*, plant in frames and on borders that are sheltered. *Carrots*, take up and store them in sand in a dry and dark place. *Endive*, house a good breadth of half-blanching stout plants in every spare frame, and stout half-blanching *Cos* and *Cabbage Lettuces*. *Onions*, examine these in store. *Parsnips*, take up, but in some soils they keep very fresh in the ground, for no ordinary degree of frost will injure them. *Herbs*, let a stock be potted for forcing in winter, especially Sweet Marjoram, Mint, Sorrel, and Tarragon. *Sea-kale*, early-ripened for forcing in dung-beds or the Mushroom-house, may be trenched-up with every root entire, and heeled in the compost-ground in order to be drawn out successively as wanted. *Tomatoes*, gather as soon as they begin to colour, and complete their ripening process in-doors, in a good dry heat.

FRUIT GARDEN.

When Peach and Nectarine trees begin to drop their leaves, it is advisable to touch them over lightly with a fine-twigged broom, commencing below and moving it towards the extremities of the branches. The leaves which are thus easily displaced, have become inert as regards the elaboration of sap, and their removal tends to improve the condition of the young shoots by exposing their bark to the sun and air, and, consequently, rendering them better adapted to withstand the effects of frost. Preparation should now be made for filling up all vacancies on walls, by entirely clearing out the soil where it has become exhausted by the roots of the trees which it formerly supported, and replacing it with fresh soil or compost. In planting some make a hole only large enough to contain the

roots, others allow a width of 3 feet or so; but trees never thrive so well in such limited pits although filled with good soil, as they do when a considerable portion of the border is uniformly loosened. Therefore, let the border be trenched to its full width in front of the vacancy, and right and left as far as can possibly be done without interfering too much with the roots of the adjoining trees; if, indeed, a few of these are cut at this time of the year there will be no harm, but in spring they ought not to be disturbed. The general impression amongst practical men is, that autumn planting is superior to spring planting. We are decidedly of this opinion, and we would advise those who intend making new orchards, removing large fruit trees, or replacing decayed young ones, to commence operations of a preparatory character immediately. Such preparations should consist, in the first place, of a necessary provision of fresh and sound loam, and if this can be obtained with some rough turf in it, so much the better; if not, it will be well to mix rough stable litter, straw, small sticks, or any other coarse material with the loam when filling into the holes. The loam being provided and placed in a high and sharp ridge in order to throw off the rains, the next proceeding is to thoroughly drain the site intended for planting. Thorough drainage being secured, stations may be formed by making a hard bottom of broken stone, rubble, broken bricks, or other hard materials, and then throwing over these a coating of cinders to prevent the soil from entering the porous materials beneath. As to depth, we would advise great moderation, provided the kinds are in any way tender or designed for the dwarfing system. For such, 18 inches in depth of soil will be ample, and if the ground is of a moist character, one-third of the volume of soil should rise above the ordinary ground-level; indeed, in all cases it is well to raise it considerably. We would recommend a trench to be thrown out without delay around very large trees intended for removal. This will at once check late growth and induce a disposition to emit fibres forthwith.

FLOWER GARDEN.

Where the beds are required for bulbs, the sooner they are cleared the better, if the weather continue dry and suitable, but by no means dig them if very wet. Such beds as have the soil exhausted should have it renewed, particularly for Hyacinths. After all that has been said about the planting of evergreens in spring, or even in mid-winter, we are persuaded that no part of the year can equal the autumn—say, from the middle of October until the end of November. Much, however, depends on the character of the soil, as well as on the mode in which the operation is conducted. Some persons advocate "puddle planting," but on what principles we never could discover. Why not puddle in potting? Certainly it is better to puddle a large specimen than to totally neglect it in regard to moisture. The best practice is, to open a hole much larger than the ball of earth or volume of roots about to be introduced, taking care not to make the hole any deeper in general than the surface soil extends, then to saturate the subsoil with water, and next to thoroughly pulverise the soil intended for filling in round the roots. After this is completed rake together tree leaves if at hand, weeds, sticks, &c., and throw 3 or 4 inches (sometimes a foot) of these in the bottom of the hole to set the ball or roots on, putting little or no soil beneath the tree. The tree being carefully removed, and, if possible, not a fibre suffered to dry during the operation, is placed on the leaves, and the process of filling-up commences. The soil being in a mellow state is slightly trodden as the filling proceeds, and when level with the ball or rather above it, the whole receives a thorough watering, using several cans of water at slight intervals. The next business, and a most important affair, is to thoroughly stake the tree to prevent wind-waving. When this is completed a thick mulching of half-rotten manure or leaves will finish the process. Such trees should have one thorough soaking of water in the early part of April, afterwards they may be left to themselves.

GREENHOUSE AND CONSERVATORY.

The climbers in the conservatory, at least some of the most rambling, will now want a dressing when they obstruct the light in any material degree. Those which flower on the young wood, and which are now in a ripening state, or approaching a state of rest, may be pruned in very closely. Such as the late-blooming Passifloras, the Combretums, Echites, Ipomæas, Stephanotis, Thunbergias, Pergularias, Mandevillas, &c., which are still thriving, must be regulated with a more gentle hand, cutting away merely barren shoots, and drawing the remainder into somewhat closer festoons, in order to throw sunlight into

the interior of the house. Some skill will be necessary in the mixed greenhouse at this period especially; there will be so many candidates for admission that confusion and, consequently, failures will be inevitable, unless some subjects be discarded, or removed to a cold-pit or plant-hospital. Better grow a few plants well than many badly.

STOVE.

A somewhat warm temperature may still be maintained here in order to consolidate as much as possible immature growth. When this is accomplished there will be less necessity for strong fire heat in the dead of winter.

FORCING-PIT.

Keep up the supply of Dutch bulbs by weekly additions, and also by contributions from the different kinds of potted plants already prepared for this purpose. Dwarf Orange trees will prove a most desirable addition in winter, they can be easily brought on in this department.—W. KEANE.

DOINGS OF THE LAST WEEK.

WITH continued frosty mornings, and a heavy rain on Friday, attended and followed by a milder temperature, no other bad effects have as yet manifested themselves in the garden than those recorded last week. We hear of blackness and wrecks in the valleys, whilst here, on Saturday, with a drizzling rain, the main crops in the kitchen garden, and the beds and borders in the flower garden, were as bright and blooming as they were in the middle of August. The *Calceolarias*, but for the rains washing off many flowers, would have been splendid; and on looking over fine plants we find there will be a difficulty in obtaining good cuttings this season, as every little shoot has put forth its truss of flowers, whilst the best cuttings are those that can be slipped off 2 or 3 inches long from the older stem, and which have not had time to become knotted with flower-trusses. We have no fear as yet for the general run of *Calceolarias*, but after the severe morning of the 4th inst., we took off a good number of cuttings of the soft yellow *Ampelxianthus*, as it will stand much less frost and rough treatment than the general run of shrubby bedding *Calceolarias*. This is the only kind we do not think safe to be kept all the winter in a cold frame or pit, and also the only kind which we like to be striking before the end of the present month. We would not think of the general collection being inserted as cuttings before the end of this month, but for the great changeability of the weather, as even on this Saturday evening, after the wind has been south and west all day, it is again due north, hinting unmistakably to us the importance of putting a lot of cuttings in before this meets the eye of the reader.

KITCHEN GARDEN.

Continued clearing off useless Pea and Bean haulm as stated last week, and put some earth to Celery in dry days, as the soaking rains previously, and waning power of the sun, will render all danger from dryness unlikely. We could use little litter for topping up as stated last week, as we wanted every bit for other purposes; but such topping, or using moss or long grass in small layers with no chance of heating, is a good preservative against damping and frost. It should not be forgotten that a blanched head of Celery will stand much less frost than one in its natural green state, and, therefore, when very late Celery is desirable in spring, it is well not to earth-up much in autumn and winter.

Planted more Cabbage plants, and strewed the spaces between with ashes and lime, to render the ground unpleasant to all the slimy tribe. Planted out and potted young Cauliflower plants; must try and have a place in readiness to receive a fine lot of plants that are now showing well, and which are to be lifted with balls. Run the hoe through young Spinach, and transplanted where it had not come up quite regularly. Spinach transplants very well when young. A rabbit found its way among a piece of Dwarf Kidney Beans under protection, and did much harm before it was caught.

After the crops were cleared from the fields, we had quite an invasion of rats, but singularly enough, though they have feasted on and carried off numbers of Pears, they did not intrude on Melons, which they could easily have done, and we have known a dozen of Melons in a frame rendered useless in one night before now. We have managed to thin the rats a little, and hope they will at least shift their quarters. This season they have chiefly annoyed us with eating into Pears, and having their share of Beans and Peas. In past seasons we

have had them in vineries, where they did much mischief, and scarcely anywhere else. We have had them carrying off and hoarding scores and hundreds of hard half-grown Peaches, and just nipping a bit out of the cheeks of those that were nearly ripe, and we have had a score on a tree thus nibbled in a night. This year, with doors and ventilators of the orchard-houses open, and fine fruit up to the present time, we have no evidence that a single rat entered, or did an atom of injury. Then how singular is their sense of smell. Two men shall set steel traps exactly alike, so that even an experienced trapper shall not be able to perceive the difference, and into the traps of one man the rat will scarcely ever enter, whilst into the traps of the other he will go headlong, as if impelled by a sort of spell, such as some catchers exercise with their attractive oils and scents. We can only come to the conclusion, that one man's touching a steel trap will be enough to keep a rat from going near it; whilst another man's setting it how he may, and leaving his peculiar scent of touch behind him, will act as an attraction rather than as a repellent. It is the best plan for those not so favoured to touch traps and baits as little as possible, and avoid even breathing upon them. The only things rats have gnawed over with us this season were *Pelargoniums*, chiefly *Madame Vaucher*, and some scarce kinds that we had in a pit to bring them on. What the rats' object could be we were unable to make out, as they seemed to eat none of the plants, and as there was air on the pit, and the rats could get out, it could not have been for moisture. We chronicled that one year they cut over all our young *Camellias* under hand-lights, just a little above the surface of the ground, and in this case, too, the tops were left, and there was no sign that the rats reaped any benefit in the way of eating for the mischief they occasioned. With such a variety of freaks it is well to get rid of them, as we never know what they may resolve upon next. Were they satisfied with a hard Pear, or a few Beans, we might care less about them. Even as respects Pears, it is rather singular they have been most destructive on some small young trees that had only a moderate crop, whilst other trees where they might have thinned the fruit and done good by the thinning, they never touched. Are the rats in this respect like men in general, and cooks in particular, who come to value anything just in proportion to its scarcity? When a gardener is scarce of anything he will act wisely by keeping the knowledge of such a fact as much as possible to himself.

FRUIT GARDEN.

Here the work was a repetition of that adverted to in previous weeks. We have still, and for a week or so more will have, a good supply of Peaches, chiefly *Walburton Admirable*. We have no *Salsway* Peaches this year, and it is chiefly valuable for keeping late. Switched the leaves from the trees in the Peach-house, and will take the first opportunity to prune, wash, and regulate, in order that we may cram the house with bedding and other plants. In the meanwhile, have put a great many plants under glass protection in the orchard-houses. Gathered in fine days the most forward fruit of Apples and Pears, going over most of our little dwarf trees several times, and taking the ripest and best-coloured first. This is one of the advantages of dwarf trees, the easy gathering; and then if a few fruit do fall, they are much less injured than if they fell from a tall orchard tree. No fruit that falls will keep equally well with that which is gathered carefully by hand, and taken from the basket again by the hand.

The frost has not been severe enough to hurt the out-door fruit as yet, and if mild weather continued we would leave the greenest a little longer. On some borders below our bush trees we have Strawberries, and as these have not been thoroughly cleaned or thinned as yet, we find the Strawberry plants save a fallen fruit as much as if it had dropped on long grass—a very different result from what happens when the fruit falls on the ground, hard or soft. We will soon finish Williams's *Bon Chrétien* Pear. From one tree we have been using the fruit for the last six weeks. *Beurré de Capiaumont* is not much for the dessert, but when hard it steves beautifully. In fact, it may be worth knowing, that all our best Pears are first-rate for stewing when used hard and before showing signs of ripeness. In a bad season some kinds that would scarcely be good enough for the dessert, may thus come in as a tempting and luscious dish.

Planting.—Had we much of this to do we would like to have all preparations made now, such as trenching, digging, and for fruit trees, at least, staking ready, where the roots will be discouraged going down, and fresh soil will be provided to encourage fibrous surface-rooting. We should never forget

that we plant an Oak for timber, and a fruit tree for fruit, and that luxuriant growth and unusual fruitfulness will ever be in opposition to each other. We have seen others try, and we ourselves have tried, two different plans to arrive at a desired definite result. In the first case, when planting fruit trees either against walls or in borders or quarters, when it was desirable to have the trees of a good size as soon as possible, then, by rich soil, mulchings, and waterings, growth was made the chief object for two or three years, and fruit less looked for than growth; and then when the tree was nearly as large as we wanted it to be, it was either taken up and replanted, or the roots cut in autumn, and the limiting of growth brought it into a state of fertility. The other plan is to keep the tree only in a moderate but healthy state of luxuriance, to stunt by stopping shoots, &c., to have the roots near the surface, and thus to obtain fruit as soon as possible with a moderate increase of growth every year. This plan, on the whole, we consider the best for the amateur who takes an interest in his fruit trees, and who would rather manage his trees with a little constant attention than have much work to do in root-pruning, or raising the roots and transplanting again. In almost all common soils this is best secured by planting the trees on mounds a foot or 15 inches above the surrounding level, with or without material of a hard nature beneath them, to prevent the roots going down. In this station-planting the soil should be well aired before planting, and it may also be improved by adding some fresh to it, that may correct what is amiss in the natural soil. By planting thus high, the roots, if mulching is given, will be encouraged to keep nearer the surface, and if extraordinary luxuriance sets in it is easier to cut the points of the roots, and thus arrest excessive vigour. In ordinary cases we find it useful to cut the roots of such moderate-sized trees merely on one side for one season. If, by concrete, or slabs 20 to 24 inches from the surface, the roots should be prevented going straight down for a space of $3\frac{1}{2}$ to $4\frac{1}{2}$ feet in diameter, the root-pruning when necessary would be attended with no difficulty, as there would be no tap-roots near the bole of the tree to look after. With such a mode of planting, and surface-mulching with a little rotten dung, the roots will be encouraged to keep near the surface, and trees in the open air will be almost as much under command as if they were grown in a tub or a pot. Our sires talked of planting Pear trees for their grandchildren, but on such a plan as that indicated a man may have a stout dwarf maiden plant planted this autumn, prune it little or nothing, let it have all the air and light possible next season, with sufficient moisture to keep on growth, and the autumn following he may gather some Pears, and not prevent the plant growing and increasing in size gradually—that is, if too much fruit be not taken from it when in a young state, as a heavy crop at first would greatly injure the tree for future bearing and moderate growth.

The sooner the ground is ready, the sooner the stations are prepared, and the sooner the trees are planted after the leaves begin to change in the least, the better will the trees succeed, and the less trouble will they require afterwards in the way of watering, &c. In fact, if the roots are kept damp before planting, if the ground is as damp as it generally is in autumn, and if the earth is packed firmly amongst the fibres, no watering will be required. It is quite a mistake to deluge roots with water in autumn planting. It places them as it were in a morass, rots them wholesale, and makes the soil so much colder than it otherwise would be, that the roots only begin to work in spring, after the sun acts on the buds, and the soil has become warmer by parting with the surplus moisture. In soil merely moderately moist, and when the planting has been done in autumn, the rooting will rather precede the breaking of the buds, and thus the reciprocal action will be obtained without the necessity of drenching the soil with the water-pail. Even in autumn planting, though the moistening the roots and preventing them being dried is essential, we have seen much labour in deluging with the water-cart, that was worse than labour and horse-power wasted. Several times we have had bundles of trees sent us so dried in roots and stems by long journeys and careless packing, that they seemed fit for nothing but faggots for heating ovens. Even these, however, have often done well when they were soaked for a dozen of hours in a pool or pond so as to absorb enough of moisture, and this soaking in such circumstances was of far more importance than any watering that could be given at the roots in the autumn. The flooding-in of roots at any time will be less productive of injury, in proportion to the porousness of the soil, freely parting with such an amount of moisture. Autumn

planting and transplanting render much water altogether unnecessary, unless the soil is very dry indeed.

ORNAMENTAL DEPARTMENT.

Calceolaria Cuttings.—We have alluded to the difficulty of obtaining good cuttings plentifully this season, owing to the abundance of flowering-stems. The short flowerless side shoots are what we prefer, from 1½ to 2½ and even 3 inches in length. We have had little trouble with them ever since, as detailed years ago, we inserted the cuttings late, in a cold frame or pit, and never let them have the least fire heat applied. We generally give each cutting about 1½ inch room, and then transplant in turf-pits in March and onwards. We are quite satisfied, if the cuttings keep alive, though they do not make a root until after the new year. The less they have grown, the less will they suffer from the changeable weather in winter. We have several times let them have six weeks of darkness in severe weather, and when gradually exposed they looked as fresh as if they had had only one night's darkness. In all such cases the inside temperature, though just above or but little below freezing, must be cool, no heat enough to encourage elongation in the darkness.

In making the cuttings, we merely cut away any ragged part from the heel at the bottom, remove the lower leaves, and shorten the larger ones at the top, to lessen a little the transpiring surface. The pit we generally use is too deep for our purpose, as we do not wish the Calceolarias to be much more than 1 foot from the glass. Were the pit shallow we should merely secure drainage, and fresh sandy soil for the cuttings. As it is, we place from one to two barrowloads of long dry litter in each light, well shaken, firmly trodden, and covered with 2 to 3 inches of rough rotten dung, or leaf mould. This is also well broken, trodden, and mixed with a little quicklime to kill any worms that may be present. On this are placed the seedlings of the sandy loam, obtained from the sides of the highway, and then the same finely sifted to the depth of 2½ or 3 inches above the leaf mould. This levelled and beaten is covered with a sprinkling of sand, road drift sand accumulated by rain floods we like best. The litter acts as a capital drainage and security against damp, and, therefore, the drier it is the better, as heat is not wanted. In a common day a stick inserted in the bed will give no sense of heat to the hand, but in a cold morning it will feel just a little warm. In a dry spring the cuttings will receive watering, and in some cases it is advisable to make holes so as to let the water sink into the litter.

To protect the back wall of this pit, we fasten straw against it 2 to 3 inches thick, the front wall plate is just above the ground level, and the ground close to the wall plate is covered with litter all the winter for the width of 2 or 3 feet. The frost once got into this pit, killing everything for a foot next the front wall, though it is covered up with earth and gravel, and hence the litter generally lies there all the winter. In fine days plenty of air is given, and a heap of litter is always kept in readiness to throw over the glass in severe weather. We would impress on those who may choose to adopt this plan, not to become anxious if the cuttings do not strike quickly. If ours keep green and healthy, that is all we care about. Numbers most likely will show roots before Christmas; but we would be as well pleased if none rooted until the turn of the sun about the new year. Then with such thick planting the cuttings will be close enough together before we can remove them under the protection of hurdles, &c., whence they are raised and taken to the flower-beds, without ever being in a pot, and generally after receiving from one to two or three waterings.

Window Plants.—These in good condition must still be made the most of; but all Scarlet Pelargoniums, Fuchsias, &c., past their best may now be removed to a spare room or a dry cellar. They require little light when in a dormant state, and little water, provided there is just a little moisture in the soil. When set on the damp flags of a cellar, they will generally have enough of moisture before they begin to grow afresh in the spring. All young and cut-back Pelargoniums of the florist and fancy kinds must have the necessary light, and be moved from the windows in cold nights. Even if the pots are rather small it will be better to remove a little of the surface soil, and replace it with fresh, and richer, instead of fresh potting into larger pots now, deferring that operation until February or March. Such fresh earth should be given so early that the roots should be reaching the sides of the pots before the short, dark days come. Everything should be done by sponging and washing to insure cleanliness.

Bulbs to make an early display cannot be too soon potted, or

put into glasses. Those who cannot place the pots on a hard surface out of doors, and cover with some inches of ashes, leaf mould, &c., may easily manage to set the pots in a cellar, dark closet, &c., and only bring them to the light after rooting well, and the tops are pushing freely. After that the more light the plants have, the more robust and better-coloured will they be.

These bulbous plants will excel all others in attraction in the windows during the winter and spring months. When many are to be planted out of doors, and the ground cannot be ready for some weeks to come, it is a good plan to set the bulbs on leaf mould a few inches apart, cover with the same, and lift with balls at the final planting time.—R. F.

COVENT GARDEN MARKET.—OCTOBER 16.

We have again to report large arrivals from abroad, including the Dutch Hamburgh Grapes, and Chamois Pears from the Channel Islands. Other varieties of Pears of home growth continue good and plentiful; Apples not so much so, and good samples are commanding a better price. We have received advice of the Newtown Pippin being a failure again this year in America, which is much to be regretted. Potato trade amounts to a fair average.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.		
Apples ½ sieve	1	0	to	1	6	Melons..... each	1	6	to	3	0
Apricots doz	0	0	0	0	Nectarines doz.	0	0	0	0	0	0
Cherries lb.	0	0	0	0	Oranges 100	8	0	14	0	0	0
Chestnuts bush.	0	0	0	0	Peaches doz.	8	0	15	0	0	0
Currants ½ sieve	0	0	0	0	Pears (dessert) doz.	2	0	3	0	0	0
Black do.	0	0	0	0	Pine Apples lb.	4	0	0	0	0	0
Figs doz.	0	0	0	0	Plums ½ sieve	4	0	6	0	0	0
Filberts.....lb.	1	0	0	0	Quinces doz.	0	0	0	0	0	0
Cobs lb.	1	0	0	0	Raspberries lb.	0	9	0	0	0	0
Gooseberries quart	0	0	0	0	Strawberries lb.	0	0	0	0	0	0
Grapes, Hothouse, lb.	1	6	4	0	Walnuts bush.	10	0	20	0	0	0
Lemons 100	8	0	12	0	do. per 100	1	0	1	6	0	0

VEGETABLES.

	s.	d.		s.	d.		s.	d.		s.	d.
Artichokes each	0	3	to	0	6	Leeks bunch	0	3	to	0	0
Asparagus bundle	0	0	0	0	Lettuce per score	1	0	1	6	0	0
Beans, Kidney, ½ sieve	0	0	0	3	Mushrooms pottle	2	0	3	0	0	0
Scarlet Run, ½ sieve	2	6	3	0	Mustard & Cress, punnet	0	2	0	0	0	0
Beet, Red doz.	2	0	3	0	Onions per bushel	2	0	3	6	0	0
Broccoli bundle	0	6	1	6	Parsley per sieve	3	0	0	0	0	0
Brus, Sprouts ½ sieve	2	0	2	6	Parsnips doz.	0	9	1	6	0	0
Cabbage doz.	1	0	1	6	Peas per quart	0	0	0	0	0	0
Capsicums 100	2	0	3	0	Potatoes bushel	2	0	3	0	0	0
Carrots bunch	0	6	0	8	Kidney do.	3	0	4	0	0	0
Cauliflower doz.	2	0	4	0	Radishes doz. bunches	0	9	1	0	0	0
Celery bundle	1	0	2	0	Rhubarb bundle	0	0	0	0	0	0
Cucumbers each	0	4	0	8	Savory doz.	0	0	0	0	0	0
pickling doz.	2	0	0	0	Sea-kale basket	0	0	0	0	0	0
Endive doz.	1	0	0	0	Shallots lb.	0	8	0	0	0	0
Fennel bunch	0	3	0	0	Spinach bushel	2	0	3	0	0	0
Garlic lb.	0	8	0	0	Tomatoes per doz.	2	0	3	0	0	0
Herbs bunch	0	3	0	0	Turnips bunch	0	4	0	0	0	0
Horse-radish bundle	2	6	4	0	Vegetable Marrows, dz.	1	0	2	0	0	0

TRADE CATALOGUES RECEIVED.

Jabez J. Chater, Gonville Nurseries, Cambridge.—*General Descriptive Catalogue.*

E. Verdier, fils aîné, 3, Rue Dunois, Gare d'Ivry, Paris.—*Rosiers Nouveaux—Catalogue of Gladioli, Pæonies, and New Roses.*

TO CORRESPONDENTS.

•• We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

MONSTROUS PEACH.—We have seen a Salway Peach grown by Mr. Richard Smith, of Worcester. It weighed 19 ozs. 14 drachms, and measured 13½ inches in circumference. It was grown in a nine-inch pot in a cool house. There were only three produced by the tree, and two fell off; so this, like the cuckoo nestling, had all the nourishment to himself.

PRESERVING WALNUTS (M. S.).—Put the Walnuts in alternate layers with damp sand in a stone jar kept in a very cold cellar. No one can identify a Pelargonium from a single faded blossom, and one bruised leaf.

PLACING BEDDING PLANTS IN SAUCERS (W. W. T.).—Nothing is so injurious to the majority of plants as placing the pots in saucers or feeders, more especially at this season of the year. You cannot keep the plants too dry if only the foliage is kept fresh. It is better to allow the plants on the lowest shelves to suffer from drip in watering the plants on the shelves above them than to set the pots in saucers.

TWELVE HARDY ROSES (F. K.).—Jules Margottin, Charles Lefebvre, Senateur Vaisse, Prince Camille de Rohan, William Griffiths, Baronne Prevost, Caroline de Sansal, Maurice Bernardin, Marchal Vaillant, Gloire de Dijon, Madame Victor Verdier, Duc de Cazes. They are hardy, good, and distinct. November is a good time to have them.

PLANTING A BED WITH ROSES (W. H. L., Burton-on-Trent).—"By all means have Manetti Roses for your bed 40 feet long, by 5 feet wide. Half standards would do no good, the Manetti Roses would grow over them. I advise Manetti Roses, or Roses on their own roots altogether, ground plants being so much the best. Put the Manetti Roses 3 feet apart every way, 24 feet would do. If standards are obtained they should be at least 8 or 4 feet high. These would do well on brirs, which the violent wind will shake:—Jules Margottin, Caroline de Sansal, Senateur Vaisse, Baronne Prevost, Charles Lefebvre, Madame Victor Verdier, W. Griffiths, Gloire de Dijon, or Celino Forestier (yellow), both excellent for standards; Duc de Cazes, John Hopper, and Marchal Vaillant. They look best about 6 feet apart, but they may be placed closer.—W. F. RADCLIFFE."

FILBERTS AND COB NUTS NOT BEARING (W.).—Filberts and Cob Nuts are only grown profitably in dry stony ground, with a subsoil or rather substratum, very porous, and at the same time healthy, so that their roots and those of other trees may descend 3 or 4 feet between the strata of stone and stone shatter. We fear that your soil in Derbyshire is a strong clay, and as you are near a smoky town, you cannot have much success. The pruning, however, may be at fault, as no trees are so severely cut in as these are. The blossoms of Filberts and Nuts suffer from frost in spring. The female blossoms are of a deep rosy purple colour, and do not appear until several weeks after the green male catkins are out. We expect shortly to have from one of our correspondents an article which may throw further light on the causes of your want of success.

DESTROYING INSECTS WITH METHYLATED SPIRITS (A. D., Heron, and Inquirer).—Apply pure with a painter's brush. The spirit does no injury either to young leaves or buds, either in a house or on walls. If diluted it would not destroy insect life.

CUTTING OFF STRAWBERRY LEAVES (Agnes).—Our practice in rather cold, stiff soil is to remove the runners, and then the old plants as soon as we can after the fruit is gathered. We remove no leaves from the plants left, but let them stand all the winter, and they thus act as a protection to the buds. In spring, when the Strawberries begin to run, the ground is hoed, and any withered long leaf is cut off, more for neatness than anything else, as even these would soon be hidden by the summer's growth of leaves. In very light land it is sometimes advisable to remove the long-stalked leaves soon after the fruit is gathered, and then a stock of new leaves close to the ground takes their place for the winter.

PEAR TREES UNFRUITFUL (C. E. M.).—If your Pear tree on the west wall, that bears so little and yet is so luxuriant, had not also showed plenty of blossom, we should have said, Root-prune. As it is, we would advise thinning the shoots or spurs to let in more light and air. Protect the blossom a little, and see that the roots are moist enough when the tree is in blossom. With the tree on the east aspect, that is healthy but does not bear, we would also thin the top and root-prune at the bottom, cutting the roots within 5 feet of the wall, and any top root that may go straight down. The tree on the south aspect requires, we imagine, similar treatment, and if the tree is old some branches may be removed and young wood laid in. After cutting or raising the roots add a little good rich loam.

RIPENING FIGS (Idem).—A few of your summer Figs, now from one to two inches long, may yet ripen in such a climate as Hampshire, especially if the winter be mild. They would have a better chance of ripening if you could cover them with glass and put a stove inside, or adopt some other mode of heating. As it is, and merely growing against a south wall, we fear that only a very few will ripen. We have as little faith in their ripening early next season by covering the trees with thatched hurdles now. The depriving the trees of light will cause all these forward Figs to drop just as they would do if exposed to the winter weather. We never knew Figs stand the covering if they were larger than Marrowfat Pears or Marazion Beans. When not larger they will generally stand, and these will ripen earlier than those which show on the last year's wood in spring. Those on the growth of the present year rarely ripen in this country. Our advice would be to leave the most forward and largest of your fruit, so as to give them a chance, and with a knife to cut off neatly all the others that are larger than a small Marrowfat Pear. Do this before you protect from the weather.

CONSTRUCTING A PROTECTIVE PIT (E. A. L.).—The pit you propose putting up at the back of your greenhouse would be better if placed in front of it—that is to say, if the greenhouse faces the south, and any other direction except the north. If so resolved your improved plan would be the best, and have your pit above ground. We have seen many useful places thus formed at little expense, as the front wall of the house would be the back wall of your pit, and a wall of 18 inches or so in front would give you a good pit for everything, either with a stage or without one. A pipe might run through the pit, or openings be made in the wall to let in heated air from the greenhouse. The sashes could be made to take off, or be hinged at the back and hold up with two sticks braced together, terminating in an iron point. The advantage of sinking part of such a pit, so as to walk inside of it, would be that you could have a fixed instead of a moveable roof; otherwise, in general, we think going below ground is a mistake, as what you gain in heat is counterbalanced by damp.

DOUBLING THE WIDTH OF A GREENHOUSE (Idem).—Your greenhouse, now 54 feet by 13, and a lean-to facing the south, and which you propose to double in width, and use for ainery, had better be made into a span-roof by taking away the present rough back wall, as if the wall remains you could make but little use of the 13 feet facing the north unless for keeping plants in bloom, and, if you are fond of such objects, growing Ferns, Mosses, Lycopods, &c. A house of this kind would do admirably for such a purpose, and the wall being there you might let it remain; but if you wish the 26 feet in width for Vines or flowers requiring direct sunlight, then the wall must come down. Part of the material would do for the north wall of the house, and if you liked you might have a low pit in the middle of the house, and thus use the materials.

LIFTING VINES (Idem).—You may raise the Vines safely as you propose; but if not experienced we would first see what a deep drain in front of the border would do.

GARDENING CALENDAR (Constant Reader, Bagshot).—"In-door Gardening" and "Out-door Gardening" are the calendars you need. They are published at our office, and may be had free by post if you enclose forty postage stamps with your address.

MARKET VALUE OF PELARGONIUMS (An Old Subscriber).—Every specimen of a variety that has received a first-class certificate must vary in price according to its size and excellence. Your question is far too wide to be answered satisfactorily.

PLANTING BULBS IN BORDERS (A Beginner).—Your match borders, 600 feet long, will be very effective if planted with early-flowering bulbs. Tulips do not flower at the same time as Crocuses, but succeed them. It is well, however, to confine the display either to early-flowering plants or to those that do not flower until a later season. The first will be secured by the planting of Crocuses and Hepaticas, &c. Presuming your borders are 12 feet wide, you may plant lines of the following, commencing with the first at 1 foot from the box or other edging, and proceeding backwards, allowing 1 foot between all the lines until the back is reached, which should be 1 foot from the back of the border:—1, Snowdrops; 2, No Plus Ultra Crocuses (blue); 3, Caroline Chisholm Crocuses (white); 4, Double pink Hepatica; 5, Large Yellow Crocuses; 6, Double blue Hepatica; 7, Sir Walter Scott Crocus (striped); 8, Double pink Hepatica; 9, Queen Victoria Crocuses (white); 10, Yellow Crocuses; 11, Prince Albert Crocus (purple). If the back of the border is lawn, then you may plant 6 inches from the margin of the grass, as well as 6 inches from the edge separating it from the gravel, a line of Winter Aconite and Scilla sibirica alternately. The above will afford an effective early display. A later display may be had by planting Tulips and Hyacinths in place of the Crocus and Hepatica, and they will be off in time for bedding plants:—1st row (1 foot from the edging of the borders), white Hyacinths; 2, blue Hyacinths; 3, red Hyacinths; 4, Duc Van Thol Tulips (yellow); 5, Duc Van Thol (rose); 6, Pottebakker Tulips (red-striped); 7, Duc Van Thol (scarlet); 8, Pottebakker (white); 9, Pottebakker (red-striped); 10, Pottebakker (yellow); 11, Pottebakker (white). You may plant Tulips only as follows:—1, Standard Royal (white); 2, Canary Bird (yellow); 3, Molière (purple); 4, Rosa Mundi (white); 5, Prince de Ligne (yellow); 6, Couleur Cardinal (red); 7, Rose Gris de Lin (rose and white); 8, Yellow Prince; 9, Vermilion Brilliant (vermilion); 10, Wapen Van Leyden (white and rose); 11, Artis (scarlet). We like all bulbs to be succeeded by bedding plants in lines, as we can put out the bedding plants between the lines of the bulbs; but you can plant them in parterre-like divisions, waiting until the bulbs are taken up before you can put out the summer plants. The bulbs of Hyacinths and Tulips will endure a number of years, and they will not get smaller in bloom every year if you allow them to mature the growth before lifting. We do not move ours oftener than every second year, and only then for re-arrangement and the removal of offsets.

CELERY FOR EXHIBITION (H. Scott).—Ivory's Nonsuch Pink and Seymour's Superb White.

TWELVE SELECT DAHLIAS (Idem).—Andrew Dodds, Fanny Purchase, Anna Keynes, Imperial, Edward Spary, Bob Ridley, Madge Wildfire, D'Arach, British Triumph, George Wheeler, Stella Colas, and Beauty of Hilperton. Twelve select Fancy varieties are Chang, Startler, Jenny Deans, John Salter, Garibaldi, Countess of Shelburne, Fanny Sturt, Maggie, Regularity, Remarkable, Elor, and Nora Creina.

CUCUMBERS FOR FRAME AND EXHIBITION (Idem).—Dale's Conqueror and Lord Kenyon's Favourite.

TWELVE SELECT VERDENAS FOR POTS (Idem).—Fanny Martin, Umpire, Nina, Mademoiselle Sutter, Rose Rendatler, Foxhunter, Champion, Reine des Roses, Mrs. Deans, Snowball, Triumphant, and Figaro.

STANDARD PEARS AND APPLES FOR ORCHARD (J. T. A.).—Pears: Thompson's (November), Comte de Lamy (October to December), No Plus Mcuris (January to March), Beurre d'Arenberg (December and January), Swan's Egg (November), Beurre de Capiaumont (October), Forelle (November and December), Jean de Witte (January), Napoleon (November and December), Louisa Bonno of Jersey (October), Windsor (September), and Catillac (for stewing). Apples: Kitchen and Late-keeping varieties—Dumelow's Seedling, Northern Greening, Bedfordshire Foundling, Alfriston, Blenheim Pippin, Norfolk Seedling, French Crab, Rymer, Hanwell Souring, Denx Ans, and Royal Russet. Late-keeping Dessert Apples: Golden Pippin, Cockle Pippin, Downton Pippin, Pearson's Plate, Nonpareil (old), Court of Wick, Adams' Pearmain, Claygate Pearmain, Braddick's Nonpareil, Kedleston Pippin, Wyken Pippin, and Sturmer Pippin. Midseason Dessert Apples: King of the Pippins, Nonsuch, Sykehouse Russet, Kerry Pippin, Cellini, and Red Ingestrie. Midseason Kitchen Apples: Mann Codlin, Lord Suffield, Stirling Castle, Kentish Fillbasket, Gloria Mundi, Oravenstein, and Keswick Codlin. Early Dessert Apples: Early Harvest, Summer Golden Pippin, and Early Red Margaret. The only good early Pears for you are Doyenne d'Ete, Jargonelle, and Hessel.

EVAPORATION-TROUGH FOR GREENHOUSE (J. H. W.).—For your house, 25 feet by 18 feet, two troughs, 6 inches wide and 4 inches deep, will be sufficient. They should not be less in length than 8 feet each.

SOWING SEEDS IN DRY SOIL (Idem).—We cannot explain the meaning of the passage you quote from "The Book of the Garden" otherwise than that the soil in which seeds are sown should not be soaked with water. It is well to have the soil rather dry, not dust dry, at the time of seed sowing; but to have it very dry is bad, as several waterings must be given before the soil can be moistened sufficiently for the germination of the seed. It is essential for vegetation that the soil in which seeds are to be sown should be moist; if it is dry they will not vegetate at all. But we think the passage quoted was intended to mean soil that was rather dry than wet, and yet sufficiently moist for the vegetation of the seed pit in it.

STOCKS FOR VINES (Idem).—We do not consider the Sweetwater would be a good stock for Buckland Sweetwater and West's St. Peter's. The Black Hamburg would be better for both, also for Foster's White Seedling. The stocks you name may do if the grafting is only for securing a change of kinds, otherwise the Vines will do quite as well on their own roots.

ORCHIDS FOR GREENHOUSE (Subscriber).—Three good Orchids for a greenhouse are Lycaste Skinneri, Lalia purpurata, Dendrobium speciosum. Three cheaper are Cypripedium venustum, Bletia verecunda, and Oncidium flexuosum. Prices could be ascertained on application to any respectable nurseryman. When so much depends on the size and strength

of the plants, it would be unfair to give quotations. Half fill the pots with broken pots or crocks, and upon that place a mixture of chopped sphagnum or moss, fibrous peat, and pieces of charcoal in equal parts, adding a little silver sand. Press the compost firmly, and raise it in the form of a cone above the rim of the pot. Place the plant on the top, and cover the roots, but not part of the stems or pseudo-bulbs, with the compost. A suitable temperature for a greenhouse from November to April is 40° at night from fire heat, and from 45° to 50° by day, air being given freely on all favourable occasions. The temperature will of course vary much, and considerably exceed those named during mild weather, and especially on sunny days. The temperatures named are for dull days and during frosty periods, being the maximum and minimum from fire heat.

COVERING FOR FRAME (Alpha).—The best covering for a frame in winter is mats, and, if necessary, clean dry straw upon the mats. A double covering of mats and 6 inches of straw upon them will keep out frost, the sides of the frame being protected.

BONE DUST FOR STRAWBERRIES (Idem).—You may apply bone dust to Strawberry plantations at the rate of 2½ cwt. to one-eighth of an acre of ground, and now is a good time to apply it.

SHRUBS FOR PLANTING AT THE CORNERS OF A HOUSE (Subscriber).—We should prefer evergreens to deciduous trees, and our choice would be a good plant at each corner of Thujopsis borealis, American or Siberian Arbor Vita, or something that would be dense in habit, afford shelter in winter, and, above all, be conical in growth. By all means have a pair. A Thorn and a Beech would be incongruous and far too spreading. A pair of the Silver-edged Hollies would be extremely handsome, only they are of slow growth. Any of those named will suit you, and they will stand as much cutting as a Privet hedge.

WALKS BECOMING GREEN (Idem).—The best plan to adopt with your walks is to have the gravel turned; and the next best is, when the walk is frozen to scrub well with a half-worn broom or whalebone brush. If the walk be well swept when the ground thaws, most of the moss will be cleared away, and the first heavy rain will make the walk clean. Strewing salt upon the walks will also destroy moss, but salt renders the walks damp and makes them soft, especially in winter.

PLANT-CASE FOR WINTERING BEDDING PLANTS (Pansy).—Your case will answer for keeping bedding plants over the winter, and you will have no necessity to keep it filled with hot water, except during severe frosts. Calceolaria cuttings will strike freely in it without heat, but the case itself will not keep the plants from frost. It will suffice, however, if the case be kept in a room where there is a fire. The four cuttings of Verbena venosa should be left in the pot, as they are, over the winter, and they will give you a number of cuttings in spring. When you have taken all the cuttings you may then cut in the plants and pot them off separately. They will make good plants for bedding-out next year, and so will the cuttings you make in spring.

PANSIES FROM SEED (Idem).—The Pansies from seed sown in August, now planted out, will flower next May, and will continue in flower the greater part of the summer, water being given freely in dry weather.

WINTERING FUCHSIAS UNDER A GREENHOUSE STAGE (A. B.).—The Fuchsias may be wintered under the stage as you propose, beneath other plants, and the drip from the plants on the stage above them will not destroy the Fuchsias if these are watered, and the pots are set on rough open stages or shelves. If the pots were set on the floor the soil might

absorb too much moisture, and that would either induce growth or cause decay.

MATHIOLA TRISTIS AND SOLLYA LINEARIS (E. A. G.).—*Mathiola tristis* is a low-growing undershrub with narrow leaves like a Stock. It grows about 1½ foot high, produces dark lilac-coloured flowers from May to July, and is a greenhouse perennial. *Sollya linearis* is a climbing plant, having very small leaves and long wiry stems, having a profusion of very handsome, small, drooping, bell-shaped, bright blue flowers in May or early in summer.

OLEANDER FLOWER-BUDS FALLING (Idem).—The chief cause of the buds falling is not affording the plant a position where it can receive the sun's rays fully, combined with a deficiency of water. When the plant is growing, and swelling its flower-buds, the pot should be set in a saucer kept full of water, and be fully exposed to the sun's rays—that is, it should not be shaded by climbers or plants overhead or near it.

HARDINESS OF ANDRORRHOEON FORMOSUS, SORGHUM NANKINENSIS, AND ARUNDO CONSPICUA (E. G.).—*Androrrhoeon formosus* is only hardy in very mild parts of the south of England, but elsewhere requires the protection of a greenhouse. *Sorghum nankinensis* is not hardy except as above. *Aruno conspicua*, though hardy in sheltered situations, also requires protection generally. It does admirably in a cool greenhouse or conservatory, and has very ornamental foliage.

ECHVEERIA POLYURENTA CULTURE (Idem).—It succeeds in a compost of light turfy loam, broken pots, sand, pieces of charcoal, and sandy peat in equal parts. Good drainage is essential, and not less important is a situation in the full sun. Dryness in winter suits it, with an abundant supply of moisture when it is growing. It thrives in a greenhouse with fire heat in winter sufficient to keep out frost.

WINTERING PELARGONIUMS, FUCHSIAS, &c., IN A STABLE (X.).—There is no difficulty in this if you can exclude frost and keep them dry. The plants must have the soil in the pots dry, and all decayed and mouldy leaves and stems must be picked or cut off as soon as they are perceived. Too much ventilation cannot be given in mild weather. Upon the setting in of severe frost a good covering of dry litter or hay over the plants will be necessary; and the windows, doors, and other places by which the cold air is likely to find a way in should be closed with straw shutters. It will not matter if the plants are kept in the dark for weeks when the weather is frosty; but upon a change of temperature they must have air and light.

EARLY AND LATE POTATOES (Idem).—We like Veitch's Prolific Ash-leaved Kidney, for very early, Lapstone and Milky White to succeed the Ashleaf, and Skerry Blue for late crops. Shaws are a large coarse kind of Potato, of no value except for cattle.

FRUIT TREES FOR NORTH DURIAM (A. W.).—For early ripening procure of *Dessert Apples*—Devonshire Quarenden, Early Julien, Kerry Pippin, Oslin, Summer Pearmain, Yellow Ingestrie, *Kitchen Apples*—Carlisle Codlin, Hawthornden, Keswick Codlin, *Pears*—Citron des Carmes, Jargonelle, Hessel, Beurré d'Amalins, Jersey Gratioli, Red Boyceau. *Plums*—Early Mirabelle, Early Green Gage, July Green Gage, and St. Etienne.

BOOK (Dir).—"The Garden Manual" may suit you. It can be had free by post from our office if you enclose twenty postage stamps with your address.

NAMES OF PLANTS (Old Subscriber, Holme).—Too withered to be certain; but probably *Acorus calamus*, or Sweet Flag.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending October 15th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 9	29.828	29.567	48	38	51	52	S.W.	.39	Hour frost early A.M., rain; heavy rain.
Thurs. 10	30.098	29.670	55	26	51	51	N.	.00	Cloudy and damp; clear and fine; frost at night.
Fri. . 11	30.179	29.924	54	38	51	51	S.W.	.15	Foggy; rain, heavy rain; overcast at night.
Sat. . 12	29.831	29.753	47	33	51	51	N.E.	.02	Foggy throughout.
Sun. . 13	29.591	29.513	53	38	51	51	N.W.	.05	Foggy; dull and cloudy; low fog at night.
Mon... 14	29.760	29.629	55	45	51	51	S.	.04	Low fog; cloudy and fine; clear and fine at night.
Tues. . 15	29.750	29.730	58	47	51	51	S.	.20	Cloudy and damp; fine; heavy rain in the evening; clear.
Mean	29.862	29.684	52.86	37.86	51.00	51.14	..	0.75	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

THE BIRMINGHAM SCHEDULE.

THE Birmingham folks generally prepare some "novelty for the season," and the unusual delay in the appearance of the prize list this year of course led to a general expectation of important changes. The expectation will not be disappointed, as the schedule differs in many particulars from that of last year; and though every one could, doubtless, pick numerous "holes" in it, I am inclined to think that the general opinion will be pretty unanimous concerning its eminently satisfactory character.

The first thing that strikes all intending exhibitors is the general introduction of cups in addition to the money prizes. Formerly these were confined to the few given by amateurs, but on this occasion the Committee have liberally seconded such efforts by adding cups to many other classes. These are, throughout, offered to cockerels of 1867, and the total result is a five-guinea cup for the best cockerel in Coloured

Dorkings, Buff Cochins, Dark Brahmas, Spanish, Silver-spangled Hamburgs, Black Red Game, and Brown Red Game. A five-guinea cup is also offered for the best cock or cockerel in Light Brahmas, and another for the best pair of hens or pullets of the same breed; whilst a cup of three guineas is offered to each sex amongst the French fowls. These additions, I venture to predict, will be appreciated by amateurs, and more than pay for themselves in increased entries. People like to have now-a-days a sort of "blue riband" in addition to the bare money prize, and Birmingham was, but is no longer, decidedly behind the age.

There are also several extra classes. Notably, a class each is now allotted to Houdan and La Fleche, in addition to Crève Cœur, and separate classes are also given to old and young birds of Dark Brahmas, instead of all ages having to be shown together. This last change was specially needed, for in no breed can hens and pullets be shown against each other with such utter impossibility of justice to either. In Pigeons a cup is offered to the exhibitor taking the greatest number of prizes; and I may also note that in the class for Any other variety, instead of first, second, and third prizes, three first and three

second prizes are offered for competition. This will encourage further fancy breeding of these pretty birds.

But perhaps the greatest change is in the system of sales. Instead of the usual "scrimmage" for all the bargains, all the mentioned birds are to be put up by auction at eleven o'clock on the Monday, starting from the list price, the usual commission being deducted from said price, and fifty per cent. on any excess realised. The effect is readily seen, the new system securing three objects: First, beginners who may achieve an unexpected success, instead of having their birds, perhaps of far greater value than they supposed, snapped up at a low price, will have something like the real value; secondly, the Show will be benefited to the farther augmentation of the prize list next year; and lastly, all will have an equal chance in purchasing—no more "rigging the market" as of yore. As I wrote very strongly not long ago on this particular point, so it is in this aspect especially that I desire to record my emphatic approval of the new plan, which will alike serve the Committee, buyers, and purchasers—impossible as such a result may seem. I fancy a well-known Birmingham Judge may take the credit of so good an arrangement, which is certainly better than that I myself proposed.

Much as we all abuse Birmingham, there is evidently "life in the old dog yet." I prophesy the best Show ever got together. Let me only repeat my request that cocks and hens of the same breed be placed over each other, and a hearty wish that

"Those may now send who never sent before;
And those who always sent, now send the more."

—NEMO.

LONG SUTTON (LINCOLNSHIRE), POULTRY SHOW.

THE arrangements for this Show were very good, and the classes generally were well filled with specimens of the highest character. The entries were nearly five hundred in number, and very few of our best poultry breeders were unrepresented. The birds were protected by a most excellent tent, of about 80 yards long by 20 in width; and this provision was a most opportune one, for there is scarcely a day in our recollection on which so incessant and heavy a rain blighted the well-doing of a poultry meeting. This was, indeed, much to be regretted, as not only was the Show itself first-rate, but the greatest exertions had been made by the Committee to insure success; and, beyond question, had not so unfavourable a downfall of rain taken place, no previous meeting of this Society could have held position, as to popularity and support, with that which took place on the 9th and 10th inst.

The Grey Dorking chicken class was so unusually good that it was necessary to pass over many very excellent pens with commendatory notice only, although at most such meetings they would have stood at the head of their class. In fact, no less than eleven pens exhibited in this class appear in the prize list. Mrs. Arkwright's cup Grey Dorking chickens were a main feature of the Exhibition. In *Cochins* and in *Brahmas* the competition was excellent, and the same remark is equally due in reference to the *Game* fowls. Both these classes, and, in short, the Show generally, however, suffered considerably in the eyes of the visitors, from the fact of so many of the birds being in heavy moult. The "Any variety" class proved so good, that an extra prize was allotted to it.

We never wish to see a better collection of *Turkeys*, both old and young birds, than those shown at Long Sutton, not a single pen in either of these classes passing unnoticed, and well deserving were they of such encouragement.

The *Pigeons* constituted one of the best shows held out of the metropolis for some years past, and an unusual number of new varieties of *Pigeons* caused considerable public attraction.

DORKINGS (Coloured, except Silver-Grey).—First, J. White. Second, Mrs. Bailey, Longton. *Chickens*.—First, Cup, and Second, Mrs. Arkwright, Derby. Highly Commended, G. Clarke, Long Sutton; H. Lingwood, Barking; J. Smith; Hon. H. W. Fitzwilliam, Wentworth Woodhouse. Commended, D. C. Campbell, Brentwood; Mrs. Bailey; Hon. H. W. Fitzwilliam; J. White.

DORKINGS (Any other variety).—First and Second, J. A. Clarke (Silver-Grey). *Chickens*.—First, J. Stott (Silver-Grey). Second, Mrs. Arkwright (Silver-Grey).

COCHIN-CHINA (Buff).—First, J. H. Dawes. Second, W. A. Taylor. Highly Commended, H. Lingwood. Commended, S. S. Mossop. *Chickens*.—First and Cup, W. A. Taylor. Second, C. W. Brierley, Middleton. Highly Commended, R. Capara.

COCHIN-CHINA (Brown or Partridge feathered).—First, C. W. Brierley. Second, T. M. Derry. *Chickens*.—First, W. A. Taylor. Second, H. Lingwood.

BRAMA POOTRA (Dark).—First, H. Lingwood. Second, J. Dring. Commended, J. K. Fowler, Aylesbury. *Chickens*.—First and Cup, R. W. Boyle, Bray, Co. Wicklow. Second, H. Lacy, Hebdon Bridge. Highly Commended, F. James; M. Brooksbank, Manchester. Commended, G. C. Osborner.

BRAMA POOTRA (Light).—Prize, J. Pares, Postford, Guildford. *Chickens*.—First, H. Dowsett, Pleshey, Chelmsford. Second, J. Pares.

SPANISH.—First, J. Wright. Second, H. Beldon, Goitstock, Bingley. Commended, E. Brown. *Chickens*.—First and Second, J. Newton, Leeds.

Second, J. R. Rodbard, Aldwick Court, Bristol. Highly Commended, A. O. Worthington; F. James. Commended, H. Beldon.

HAMBURGS (Gold or Silver-pencilled).—First, H. Beldon. Second, Withheld. *Chickens*.—First, W. & J. Barstone. Second and Highly Commended, H. Beldon.

HAMBURGS (Gold or Silver-spangled).—Prize, H. Beldon. *Chickens*.—First and Cup, Messrs. Ashton & Booth (Silver). Second, H. Beldon. Highly Commended, T. Walker, jun. (Golden); J. Wilde (Golden).

ANY OTHER DISTINCT VARIETY.—First and Second, H. Beldon (Silver-spangled and Black Polands). Extra, C. Pocklington (Golden Pheasants). Very Highly Commended, National Poultry Company (Houdans). Highly Commended, National Poultry Company (Creve Cœur); Mrs. E. Cross (Creve Cœur); T. Hardy (Creve Cœur). Commended, J. O. Hobson (Creve Cœur); Mrs. Bateman (Silkies); A. S. Rao (Silver-spangled Polish); Mrs. J. Clarke (White Cochins); Hon. H. W. Fitzwilliam (Creve Cœur). *Chickens*.—First and Cup, H. Beldon (Black Hamburgs). Second, G. Lamb (White Cochins). Very Highly Commended, D. Gellatly (Houdans). Highly Commended, National Poultry Company (Creve Cœur); J. A. Taylor. Commended, A. O. Worthington.

GAME (Black-breasted Reds).—First, J. Fletcher, Manchester. Second, J. Jekin. *Chickens*.—First and Cup, R. Pashley. Second, J. Fletcher. Highly Commended, G. Bagnell.

GAME (Brown and other Reds).—First, S. Matthew. Second, J. Jekin. *Chickens*.—First and Second, H. Warren. Highly Commended, J. Jekin; J. Smith. Commended, J. Laming.

GAME (Duckwing and other Greys and Blues).—*Chickens*.—First, S. Matthew. Second, G. Lee. Highly Commended, R. Pashley.

GAME BANTAMS (Black-breasted Reds).—First and Cup, J. J. Cousins. Second, J. W. Morris. Highly Commended, J. Fletcher. Commended, J. W. Morris.

GAME BANTAMS (Any other variety).—First, J. W. Harrison (Duckwing). Second, J. Cousins (Duckwing).

BANTAMS (Gold or Silver-laced).—First and Cup, T. C. Harrison. Second, G. W. Boothby (Silver). Highly Commended, R. Charlesworth (Laced). Commended, S. & R. Ashton.

BANTAMS (White or Black, clean-legged).—First, H. Draycott (Black). Second, W. A. Taylor. Highly Commended, T. C. Harrison (Black). Commended, S. & R. Ashton, Mottrom, Cheshire.

BANTAMS (Any other variety).—First, W. J. Cope (Pekin). Second, T. Burgess.

TURKEYS (Any variety).—First, Mrs. Harris. Second, E. Ryder. Highly Commended, P. Harris (Norfolk Grey); E. B. Bettinson. *Poultis*.—First, J. Smith. Second, E. Ryder. Highly Commended, E. Harris; Rev. J. W. Mellor, Colwick Rectory, Nottingham; J. W. Harrison.

DUCKS (Aylesbury).—First, J. K. Fowler. Second and Commended, Rev. C. H. Cross. *Ducklings*.—First, J. K. Fowler. Second, J. W. Harrison. Commended, Mrs. J. Clarke.

DUCKS (Rouen).—First, J. Wright. Second, J. W. Harrison. Commended, H. Beldon. *Ducklings*.—First, J. F. Boll. Second, J. A. Clarke.

DUCKS (Any other variety).—First, T. C. Harrison. Second, Mrs. J. Clarke (White Peruvian). Highly Commended, J. Cropper; H. Beldon.

GESE (Any variety).—First, T. Hardy (Toulouse). Second, Mrs. Brackenbury (White). Highly Commended, J. A. Clarke; I. Betts.

GOULDS.—First, T. Hardy (Toulouse). Second, J. K. Fowler (Toulouse).

SELLING CLASS.—First, Mrs. Brackenbury (Spanish). Second National Poultry Company (Creve Cœur). Highly Commended, D. C. Campbell (Coloured Dorkings); National Poultry Company (Houdans); J. Wilde (White Bantams). Commended, J. Clarke (White Cochins); S. S. Mossop (Buff Cochins); J. W. Harrison (Brahmas).

PIGEONS.

CARRIERS (Black).—First, F. Crossley. Second, F. Wiltshire. Highly Commended, F. Crossley; E. Walker. F. Wiltshire.

CARRIERS (Any other colour).—First and Second, R. Fulton, Deptford, London.

TRUMPERS (Almonds).—First, F. Key, Beverley. Second, F. Wiltshire. Highly Commended, F. Crossley; F. Wiltshire; R. Fulton.

TRUMPERS (Any other variety).—First and Second, R. Fulton (Mottles, Agate Mottles). Highly Commended, R. Siddal; H. Yardley, Birmingham; I. Glassey (Black Dotted); J. Fielding, jun. Commended, H. Draycott (Blue Baldpates).

POUTERS (Red or Blue).—First, R. Fulton (Blue). Second, F. Crossley (Blue). Highly Commended, H. Beldon (Blue).

POUTERS (Any other colour).—First and Second, R. Fulton (White).

JACOCHINS (Any colour).—First, L. Glassey (Yellow). Second and Highly Commended, J. Thompson.

FANTAILS (Any colour).—First, H. M. Maynard (White). Second, H. Draycott (White).

OWLS (Any colour).—First and Second, J. Fielding, jun. Highly Commended, F. Crossley (Blue).

TURBITS (Any colour).—First, R. F. Payling (Yellow). Second, F. Wyatt (Yellow). Highly Commended, H. Yardley; J. Thompson.

BARNS (Any colour).—First, F. Wiltshire (Black). Second, H. M. MacLure. Highly Commended, F. Wiltshire (Yellow); J. Fielding, jun.

SKALLOWS.—First, H. Snushall (Black). Second, H. Draycott (Black).

ANY OTHER DISTINCT VARIETY.—First, J. Thompson (Mottled Trumpeters). Second, F. Crossley (Blue Dragons). Highly Commended, T. Martin (Magpies); D. Yong (White Dragons); A. Heath; F. Wyatt (Red Fairies). Commended, H. M. Maynard (Ural Ice); National Poultry Company (Runts); H. Yardley.

SELLING CLASS.—First, H. Snushall (Turbits). Second, J. R. Jessop (Hull Pouters). Commended, H. Draycott (Blue Brunswick); J. Laming (Black and Dun Carriers).

RABBITS.—Any pure breed. First, Wagstaff & Hanson. Second, R. Wise (Silver-Grey). Highly Commended, H. Draycott (Spanish). Commended, M. Millington (Lop-eared Buck); J. Barber (Yellow and White Buck); Messrs. Wagstaff & Hanson; J. Leigh; A. H. Easton; A. S. Wyllie (Belgian Hare Rabbit); W. Allison. *Hervent of any breed*.—First, C. Gravel. Second, Messrs. Wagstaff & Hanson. Commended, W. Beatty; National Poultry Company.

LOCAL PRIZES.

DORKINGS, GAME, COCHINS, BRAHMAS, SPANISH, AND HAMBURGS.—Cap, J. Dring (Dark Brahma). Second, T. M. Derry (Partridge Cocker). Third, S. S. Mossop (Buff Cochins). *Chickens*.—Cap, G. Lee (Duckwing Game). Second, G. Clarke (Dorkings). Third, R. Capara (Buff Cochins).

ANY OTHER VARIETY.—Cap, S. S. Mossop (Black Bantams). Second, J. O. Hobson (Creve Cœur). Third, G. Clarke (Houdans).

GOSLINGS.—Prize, E. Wilkinson.
 DUCKLINGS.—First, J. A. Clarke (Rouen). Second, J. Cropper. Third, Withheld.

The Judges of the Poultry were E. Hewitt, Esq., of Birmingham; and Richard Teebay, Esq., of Preston; the Pigeon prizes being awarded by W. B. Tegetmeier, Esq., of London.

CHELMSFORD POULTRY SHOW.

We have only room for the list of the awards made at this Show, held on the 15th and 16th inst., and must defer our report till next week.

YOUNG BIRDS.

DORKINGS (Coloured).—First, Second, and Third, Dr. D. C. Campbell, Brentwood. Highly Commended, F. Parlett, Chelmsford; H. Lingwood, Barking; Hon. H. W. Fitzwilliam, Rotherham; H. Loe, Appuldurcombe; J. F. B. Bott, Hatfield Peverel. Commended, F. Parlett; Hon. H. W. Fitzwilliam; W. H. Walker, Shenfield, Brentwood.

DORRINGS (Silver-Grey).—First, F. Parlett. Second, H. C. Wells, Chelmsford. Third, Rev. E. S. Tiddeman, Chilverditch Vicarage. Commended, F. M. Shaw, Bury St. Edmunds.

DORRINGS (White).—First, J. M. Rice, Steyning. Second, H. Lingwood. Commended, I. Perry, Chelmsford.

GAME (Black-breasted and other Reds).—First and Second, Rev. F. Watson, Kelvedon (Brown Reds). Third, H. Loe (Black Red).

GAME (Duckwing and other Greys and Blues).—First, F. Dyson, Halifax (Duckwing). Second, J. Firth, Halifax (Duckwing). Third, W. Gray, Margaretting (Duckwing).

GAME (White and Piles).—First, R. Pashley, Worksop. Second, Rev. F. Watson. Third, J. J. Hazell, Manningtree.

COCHIN-CHINA (Buff).—First, Hon. Miss Douglas Pennant, Penrhyn Castle, Bangor. Second, H. Lingwood. Third, P. W. Rust, Hastings.

COCHIN-CHINA (Any other variety).—First, J. R. Rodbard, Bristol (Partridge). Second, F. G. Phillips, Chippenham (Partridge). Third, H. Lingwood, Woodbridge (Partridge).

SPANISH.—First and Second, F. James, Peckham. Third, W. H. Walker, Brentwood.

BRAMA POOTRA (Dark).—First and Third, Hon. Miss Douglas Pennant. Second, H. Lacy, Hebburn Bridge. Highly Commended, H. Dowsett, Chelmsford. F. James; J. K. Fowler, Aylesbury.

BRAMA POOTRA (Light).—First and Second, J. Pares, Guildford. Third, H. Lacy. Commended, H. M. Maynard.

HAMBURGS (Gold or Silver-pencilled).—First, H. Loe. Second, W. J. Bairshaw, Bingley (Silver). Commended, C. Havers, Iogastone (Silver).

HAMBURGS (Gold or Silver-spangled).—First, H. Loe. Second, T. Blakeman, Wolverhampton (Gold). Commended, Rev. F. Tearle, Newmarket (Silver).

POLISH (Any variety).—First, Mrs. Procter, Hull (Silver). Second and Highly Commended, T. P. Edwards, Lyndhurst, Hants (White-crested).

FRENCH.—First, Col. Stuart Wortley, Grove End Road, London (Crève Cœur). Second, W. Tippler, Roxwell (Houdans). Third, J. K. Fowler. Commended, H. M. Maynard (Houdans).

ANY OTHER VARIETY.—First and Second Withheld. Third, W. Tippler.

GAME BANTAMS (Black-breasted and other Reds).—First, W. F. Entwistle, Leeds. Second, W. Boucher, Notting Hill (Black Red). Third, Mrs. Saltmarsh, Chelmsford (Black Red). Highly Commended, G. Manning, Spriogfield (Black Red); J. W. Morris, Rochdale.

GAME BANTAMS (Any other variety).—First, W. F. Entwistle. Second, J. Parlett, Huntingdon (Pile). Third, J. Crossland, jun., Wakefield (Duckwing). Commended, Mrs. Saltmarsh (Duckwing).

BANTAMS (Any other variety).—First, T. C. Harrison, Hull. Second, J. Allen, Amptill (rebrigit). Highly Commended, G. Griggs, Romford (Speckled-booted). Commended, E. Pigeon, Lymington, Exeter (Japanese); S. & R. Ashton, Mottram, Cheshire (Black).

DUCKS (Rouen).—First and Second, F. Parlett, Chelmsford. Third, H. Dowsett, Pleshey. Highly Commended, H. Dowsett. Commended, J. F. Bott.

DUCKS (Aylesbury).—First, Mrs. Seamons, Aylesbury. Second, J. K. Fowler. Third, Mrs. Clarke, Redford. Highly Commended, J. K. Fowler. Commended, H. Dowsett; Rev. C. H. Cresse, Cambridge; J. F. Bott; W. Tippler.

DUCKS (Any other variety).—First, Mrs. Clarke (Peruvian). Second, S. & R. Ashton (Teal). Highly Commended, Mrs. Mayhew (White Call). Commended, T. C. Harrison; S. Burn, Whitchy (East Indian).

GESE.—First, Mrs. Seamons. Second, J. K. Fowler (Toulouse). Third, H. D. Postans, Stoke-by-Nayland. Highly Commended, Mrs. J. Upson, Rivenhall (Toulouse, China).

TURKEYS.—First, Mrs. Mayhew. Second, C. Carter, Billericay. Third, A. Hutley, Witham. Highly Commended, C. Carter; J. F. Bott.

SELLING CLASS (FOWLS).—First, R. Pashley. Second, Dr. D. C. Campbell. Highly Commended, Dr. D. C. Campbell; Rev. F. Tearle. Commended, E. Sheerman, Chelmsford; Hon. Miss Douglas Pennant; J. Parlett.

SELLING CLASS (DUCKS).—First, F. Shaw. Second, F. Parlett. Highly Commended, H. Dowsett; W. Tippler. Commended, Rev. F. Watson; H. Dowsett; Rev. G. Gilbert; R. Pashley.

SINGLE COCKS.

GAME COCK (Undubbed).—Prize, Hon. H. W. Fitzwilliam. DORRINGS (Any variety).—First, F. Parlett. Second, Dr. D. C. Campbell. Commended, F. Parlett; O. E. Cresswell, Houslow.

GAME (Any variety).—First, S. Matthew, Stowmarket. Second, Rev. F. Watson (Brown Red).

COCHINS (Any variety).—First, W. Tippler. Second, E. Sheerman.

BRAMA POOTRA (Any variety).—First, J. K. Fowler. Second, Withheld.

HAMBURGS (Any variety).—First, H. Loe. Second, C. Havers.

GAME BANTAMS (Any variety).—First, W. F. Entwistle. Second, E. White.

ANY OTHER VARIETY.—First, W. Tippler (La Flèche). Second, Hon. H. W. Fitzwilliam (Crève Cœur). Highly Commended, H. M. Maynard (Crève Cœur); J. K. Fowler (French). Commended, G. Griggs (Speckled-booted).

PIGEONS.

CARRIERS.—Prize, H. Yardley, Birmingham.

POUTERS.—Prize, H. Yardley.

TUMBLERS.—First, J. Ford, London. Second, P. H. Jones, Fulham (Almond). Highly Commended, J. Ford. Commended, H. Yardley.

JACOBS.—First, F. Elze, Bayswater. Second, Rev. F. Watson.

PANTAILS.—First, F. Elze. Second, H. Yardley.

BARBS.—First and Second, P. H. Jones (White and Black). Commended, J. Ford.

TRUMPETERS.—First and Second, E. Sheerman, Chelmsford (White). Highly Commended, F. Waitt, Sparkbrook, Birmingham (White). Commended, E. Sheerman (Black).

OWLS.—Prize, P. H. Jones (Foreign).

ANY OTHER VARIETY.—First, P. H. Jones (Red Turbiter). Second, F. Waitt (Blue Fairies). Highly Commended, E. Pigeon Lymington, Exeter (Dragons); H. Yardley; F. Elze. Commended, P. H. Jones (Yellow Dragon).

CAGE BIRDS.—Canary (any variety).—First, F. W. Maun, Chelmsford. Second, W. B. Hughes, Chelmsford. Mule (any variety).—Prize, W. B. Hughes. Goldfinch, Bullfinch, or Linnet.—Prize, W. B. Hughes. Any other Variety not mentioned.—First, Rev. F. Tearle (King Parrot). Second, R. E. Garrod, Chelmsford (Austrian Magpie). Highly Commended, Mrs. Saltmarsh, Chelmsford (Grey Parrot); W. B. Hughes (St. Helena Canary); Mrs. Ormond, Chelmsford (Grey Parrot); Miss Meggy, Chelmsford (Green Crow Parrot); R. E. Garrod (Port Lincoln Parrot).

JUGGES.—E. Hewitt, Esq., Sparkbrook, Birmingham; and W. B. Tegetmeier, Esq., Muswell Hill, London.

BEDALE POULTRY SHOW.

This was held on the 9th inst., in Mrs. Beresford Peirse's Park. Unfortunately the weather was unfavourable, rain falling almost without intermission. There were seventy-eight entries of poultry, and the quality upon the whole was good, several of the pens containing fine birds. The class of Ducks of any variety was of a miscellaneous character, there being no less than eighteen entries, of good birds.

The following is the prize list:—

GAME.—First, W. Bearpark, Ainderby Steeple. Second, J. B. Booth, Killyer. Commended, Miss Peirse, Bedale Hall.

DORKING.—First and Second, J. White, Warlaby.

POLAND.—First and Second, G. Carter, Sand Hill, Bedale.

COCHIN-CHINA.—First, G. Carter. Second, Rev. J. G. Milner, Bellerby.

GOLDEN-SPANGLED.—First and Second, J. Johnson, Ainderby.

SILVER-SPANGLED.—First, E. Brown, Bedale. Second, G. Carter.

BANTAM.—First, Graves, Swinton. Second, Miss Pierse.

TURKEY.—First, T. C. Booth. Second, White, Burill.

GESE.—First, J. Pinkney, Crakehall. Second, Miss Todd, Park House, Horuby.

DUCKS (Aylesbury).—First and Second, J. Richardson, Constable Burton.

DUCKS (Any Cross-breed).—First, J. B. Booth. Second, J. G. Milner. Commended, W. Bearpark; Mrs. B. Peirse, Bedale Hall.

JUDGE.—Mr. Hardy, Bradford.

OVERCOMING BROODINESS.

In your number of the 3rd of October, "E. F. T." asks "What is the best plan to adopt with obstinately broody hens," or, as we term them in the north "clocking hens?" The plan I have adopted for a number of years with success, has been to place them in solitary confinement. Take the hen away from her companions, put her in a comfortable house, feed her well, and in the course of a few days all desire to sit will have passed and she will begin to lay very soon again.—M. A. W., Durham.

NOTES ON FANCY PIGEONS.—No. 9.

ARRANGEMENTS FOR, AND MANAGEMENT OF, PIGEONS.

DOMESTIC Pigeons, like every other domestic creature, bipedal, quadrupedal, or winged, have a first and foremost necessity, and that is a home. They must have a home, and, unlike poor Paddy, they must have room, or they will not increase and prosper. It is quite painful to see a large number of Pigeons crowded into a small space. Oh! the fighting, the breaking, or rolling about of eggs, the tumbling out of the nest of newly-hatched young ones, and the pecking of heads of young gentry just able to run about; but, alas! for themselves, not old enough to fly from the sharp beaks of grown-up and savage neighbours, who are very unneighbourly, or I will say neighbours, but not friends. Many a time have I seen a young pair with bald heads, though not by breed baldheaded.

Now, everybody knows that Pigeons pair; we say a pair of doves, and a pigeon-pair of children is a common expression, and we call a young and loving bride and bridegroom a perfect pair of pigeons; but everybody does not know that there is a difficulty in getting them to pair as you wish them, or even to get them to pair at all, or as soon as they are adult. Theirs is a similar case to the following. A young lady and gentleman who meet only in the company of others, often in a crowd, really think nothing of each other whatever; but let the same young people stay, without other company, in a dull house nine miles from anybody, and let the weather be thoroughly bad, a

foot and a half of snow on the ground, or a November mist that looks as if you might slice it with a carving-knife, so that going out is an utter impossibility, these young people are consequently together every day, and all day long. The good-natured lady of the house leaves them in the morning with, "I know you won't mind my being absent." Well, ten to one but these young people begin before the week's out to bill and coo, and actually arrange to be man and wife. Oh! this shutting-up system is far more fatal than archery meetings, or croquet parties. Thus it is as I have said with two Pigeons of opposite sexes, let them be with others they take no notice of each other, but shut them up in a cage or rabbit-lutch in a quiet place where they have only their own sweet company, and in a very few days they will pair, and this is all about it. Feed them with hempseed, and the process is probably hastened by a day or two. Once well mated let the hens have a home of their own—i.e., a nesting place. Enclose them in it for a few days with a wire front, allowing room for food and water, and they will adopt it as their home for ever, and be infinitely happy, cooing, nesting, laying, sitting, hatching, and rearing up their young.

But what of the loft? Few people are able, or inclined to build one, but usually make use of any suitable place—thus, a portion of a room over a stable or coach-house, or any little building that comes handy. The great point is to be certain that neither rat nor cat can find admittance. I put aside all ideas of pole-houses and of lockers, triangular or otherwise, nailed to a wall. Some hardy Pigeons may exist in them, but cannot be happy. Rain, sleet, snow, wind, and sun, render such places by no means homes, and a Pigeon must have a home. You never need fear that a loft will be too warm, for Pigeons like warmth. My present loft is a ceiled room over my coach-house, and very hot it is in summer, as the aspect is south, and there is only one little window, out of which the birds fly, and yet in eleven years I have had no disease among them.

Some rich fanciers build a range of hut-like wooden erections along a south wall, with an outer court, or wired enclosure, in which the birds take exercise. One variety is kept in one compartment, another in the next, and so on. One thing is certain, that Pigeons greatly prefer having their nests on the ground. Put up any number of neat boxes, paint them pure white, make every preparation, but in spite of all the first pair of Pigeons will occupy for a nest, the snugest, probably the darkest corner of the flooring of the room; the next pair the next snugest, and so on. Then they will have nests between, until there is a line of nests on every side of the floor. Meeting this wish and preference of Pigeons, I always have nests prepared for them on the floor, allowing two for each pair. This is my plan—a plank of wood forms the top of the nests, then divisions are made of a foot square, the floor forming the bottom, but every alternate dividing-board is made to project a foot out from the nest. This plan breaks the line of nests into parts, each part containing two nests, and also a pugnacious cock cannot run along the front and possess the whole range to himself, as such cocks are apt to do. A moveable slip of wood 2 inches high keeps the straw in, and being moveable the nest can be easily cleaned. I also keep a wire front, which will enclose a new pair of birds in these two-roomed houses. Blocks of wood a foot or two high serve for resting and roosting, and keep the birds clear from their own droppings. Gravel on the floor, and a heap of broken mortar, and a bit of salt in a pan, complete my arrangements, as my Pigeons have their full freedom. It is well that the landing-board outside, and inside, too, should be broad, as broad as a good-sized tea-tray, as the Pigeons, especially the young fliers, and the new birds, can more readily alight on it, and get in or out. The entrance should be closed at night; a cord and a pulley attached to a latticed shutter effect this.

When you buy new birds draw the flight feathers of one wing, and by the time they grow the Pigeons will be settled in their home.

If you are beginning the fancy, shut in your first pairs for a fortnight or more, but have a hollow square of wire placed on the alighting-board, so that the birds may come out, sun themselves, and grow familiar with the surrounding scenery. This they must learn, because if kept a year and let out without previous knowledge of the surroundings of their home, it is ten to one they could not find their way back again after a flight.

Hopper or feeding vessel I use none, but others can. I prefer my pets feeding at my feet on the gravel path. Water-bottle you can have. I have galvanised iron pans, which I insist upon being supplied every day, and re-supplied in case the

Pigeons wash and scatter out the water. Tares, if old, beans, and peas, are excellent food for Pigeons. Then come barley, Indian corn, and wheat. Hempseed I call Pigeons' "goodies," for they love it as children love sweetmeats. By hempseed you can always tame them, they will follow you anywhere for a few grains—get under the crust of pie, I verily believe, but much is not good for them. Pigeons that have their liberty pick up all sorts of seeds, &c., and really do no damage. A young pair just out of the nest amuse me infinitely; their parents will not feed them, so they peck and squeak, squeak and peck, and are very miserable, and evidently think it a horrible world because they are obliged to feed themselves.—WILTSHIRE RECTOR.

PAST BEE SEASONS.

In the Journal of the 26th of September, page 247, "B. & W." writes, "In 1861 we had a very bad year, I never knew a worse at that time; but 1867 has proved hitherto far worse." Has not your excellent correspondent made a slight mistake in attributing the character of an exceptionally bad season to 1861? 1860 was terribly bad; 1861 was with us by no means an unfavourable year; then again, 1862 was, if possible, worse than 1860.

In 1861 I devoted the chief resources of my apiary to stocking Langstroth hives, either by transferring combs and bees into them, or by making artificial swarms, yet I was enabled to take a good harvest of honey. On referring to the account of my apiary in 1861, which appeared in the Journal in April 1862, I find as follows:—"This concludes the category of my hives in 1861. It will have been apparent to those who have perused these articles, that I was more desirous of transferring my stocks into Langstroth boxes, or of peopling the same with artificial swarms, than of reaping a good honey harvest. Had the entire resources of my apiary been devoted to the object of obtaining honey, I believe the amount would have been very far beyond anything ever before experienced by me. I never remember honey to have been anything like so abundant as during the months of April, May, and June of last year (1861), but in addition to the swarms obtained, and stocks established, I was rewarded with about 175 lbs. of honeycomb, most of it of superior quality." Since writing the above, I have turned to "B. & W's" account of his apiary for 1861; written on the 29th of October of that year. "I may further state that my honey harvest has reached the amount of 207 lbs. weight of honey and honeycomb, of which I have sold upwards of 1 cwt, for £7 0s. 2d., some of it fetching as high a price as 1s. 6d. per lb. This is decidedly the best honey harvest I have ever had from only seven hives partially plundered.—B. & W."

I think our friend must in his recollections have confounded one of the two bad years I have named, with 1861. The season of 1859 was a splendid one with me. I obtained a greater number of fine supers than I had then ever before taken—viz., one of 52 lbs., one of 45 lbs., another of 41 lbs., &c. In 1860 I took no honey, in 1861 as described above; in 1862 about 12 lbs. of honey rewarded my efforts, with other supers partially filled but unsealed.

1863 was a splendid season, one super of 51 lbs., besides many others of great weight.

1864 also as good, or better; one super of 75 lbs. taken from one hive, and 480 lbs. from twelve hives.

1865 a good season, about 280 lbs. obtained.

1866. Part of the season good, the rest but middling; one super of 80 lbs. being splendidly filled.

1867. This year has been exceedingly bad. No honey, no swarms, and hives very weak in population, and but moderately supplied with stores for the winter.—S. DEVAN FOX, Exeter.

HUMBLE BEES FOR AUSTRALIA.

THE Melbourne Acclimatisation Society is exceedingly anxious to obtain an importation of humble bees, and I have received applications from two different gentlemen for advice and assistance in attaining the desired object. At first I was very much puzzled and quite at a loss to imagine what the Anstrabians could want with humble bees in a land where the hive bee in both its European species—*Apis ligustica* as well as *Apis mellifica*—flourishes to an almost unprecedented extent. This enigma has, however, received a remarkable and most complete solution, since I learn by a recent communication from a much-esteemed correspondent that red clover, which is, I believe,

successfully cultivated in that country, is nevertheless completely sterile owing to the absence of its natural fertiliser the humble bee. Under these circumstances it is of course apparent that no red clover seed can be matured in the colony, but that all that is required must be imported from Europe at a very considerable expense, which might be almost entirely saved by the naturalisation of the humble bee.

My first proposal was, that a number of queens should be sought for and collected as soon as they commenced hibernating, and that having been packed in moss they should be placed in the ice-room of a fast ship, there to remain until they reached the Antipodes, where it might be hoped they would arrive in sufficient time to admit of their forming nests and propagating their species during what remained of the Australian summer. The realisation of this apparently very promising scheme is, however, as I am informed, rendered impossible by the fact that there are now no ships going out fitted up with ice-rooms, the only ones fitted in this way having been those in which the salmon ova were sent out, and, of course, at a very heavy expenditure.

This idea being for these reasons entirely impracticable, information is now sought as to whether there is any possibility of securing humble bees in some sort of package in which ample food might be contained, and in which they might make the voyage. I confess that this project does not seem to me very feasible; but as a great many readers of "our Journal" are probably much better posted-up in the natural history of the humble bee than myself, I should be greatly obliged by their opinion upon the point, as well as by their suggesting any other mode by which the desired end might be obtained, advising us also as to the selection of the most valuable species,* and the best mode of, as well as the most favourable localities for, capturing them.—A DEVONSHIRE BEE-KEEPER.

DRIVING BEES.

WILL you kindly describe the surest method of driving bees from one hive into another? I have attempted it four times this year, and partially failed. Although I succeeded in getting the combs from the hives, I had to drown many of the straggling bees that would not leave.

I am at a loss to understand what is meant in page 59 of "Bee-keeping for the Many" where it commences, "All is now finished until an hour after sunset," and so on until it ends in "peace and harmony." Am I to understand that the hive which is to be put on the top of the full inverted hive is an empty one? and that I am to let the bees remain in that until an hour after sunset, then take the hive containing the bees only, and put it opposite the hive which I want them to enter, place it on two sticks, and then give a smart stroke, and knock the bees out between the two sticks, and they will then enter the previously inhabited hive, and that will do until next summer? Will not the bees that have been driven into an empty hive from a full one, and kept there for six or seven hours, desert it, having left a full home for an empty one?

I will now explain how I proceeded to drive my bees, and failed to a certain extent. About six o'clock in the evening I turn the hive which I want the honey from upside down, putting one occupied with bees and partly filled with combs on the top of it, and I tap gently on the bottom one for about twenty minutes; then I leave it for a while, but find on returning that they have not yet left the bottom one. I have thus left the hives for the night as they were, one on the top of the other. Early the following morning I go to them, but find a great number of bees still in the bottom hive with the honey. Being afraid of the bees, I take the top one off, and put it on the floor-board, and then I am sorry to say, I have been obliged to drown the bees that will not leave the hive, in a can full of water, and knock them out on the ground, worthless. I have of course an objection to mixing the honey with water, which I think is wrong.

I am very anxious to save the bees, and by joining weak hives to make them strong in the following summer. Many of my neighbours would be glad if I could put them in the right way to save their bees; but I, not having much practice, am rather timid. I have joined four stocks this summer; but not with perfect success. I should like to be able to drive them

without any loss of life if practicable, and am most anxious for information on the point.

I am also at a loss to account for my Ligurians carrying in white pollen, and being covered all over with white powder, like a miller's coat.—T. H., *Montgomery*.

[Mr. Woodbury gave a very full description of the entire process of driving bees in No. 139 of our new series, and we are now promised another contribution from his pen which will embrace and enter minutely into all the details of the same subject. With regard to the meaning of the passage to which you refer in "Bee-keeping for the Many," it is intended that bees shall remain in the empty hive set on the old stance, from the time at which they are driven until the evening, when they are to be knocked out on a cloth and surmounted by the inhabited hive which they are intended to enter. Your attempts at driving seem to have resulted in partial failures, owing to lack of experience, and from not persevering long enough. The articles to which we have already referred will afford you full information on all points. We are quite at a loss as to what flower affords your Ligurians such abundance of white pollen at this advanced season.]

OUR LETTER BOX.

MR. M. C. HARRISON, *Southport*.—As my last notice appears to have been overlooked by Mr. Harrison, I have again to ask him to furnish me with his full address. A communication which I attempted to send to him by post has come back through the dead-letter office.—T. W. WOODBURY, *Mount Radford, Exeter*.

MORLEY POULTRY SHOW.—The second prize for Black Bantama was awarded to Messrs. S. & R. Ashton, and not to Mrs. Staunton, as reported in the list.

PROMOTING RAPID GROWTH (*Partridge Cochins*).—The best course is to give good ground food mixed with milk; cooked meat chopped fine. Food to be constantly changed and given frequently, a little at a time. To this add warm roosting, but no artificial heat, a good run, and plenty of growing green food. The Partridge Cochins cock should weigh 8 lbs. when nine months old, and the pullet of the same age 6 lbs. If more, so much the better.

RABBITS WITH DISEASED LIVERS (*Tubercle*).—Your Rabbits have suffered from hereditary disorder of so serious a nature, that one of the parents should be got rid of. Disease of the liver in Rabbits is very common, but generally the tumours that project from the surface of the liver, and that are also to be found in the interior of it, are of a cartilaginous, almost a bony character. They also suffer from "founders," like sheep. In wild Rabbits, these appearances of the liver follow a long, wet, and damp time. It is against their health or nature to do well with wet fur. Over-feeding on green food or wet green food will always cause disease. The cheesy matter that forms the tubercle is a common disorder, generally supposed to be inherited from the buck. We have known it to be in large lumps between the skin and flesh, so large as to be easily felt by the hand. We have been successful Rabbit-breeders, but we always followed one plan, which was never to allow a doe to rear more than four young ones at a time. We then never had any disease or weakness among them. If they are bred for table purposes only, she may rear all she brings forth, but care must be taken to supply food in proportion to the number. All these diseases will appear where breeding in and in, especially between parent and produce, is practised.

FEEDING BEES (*A Constant Reader*).—Lump sugar dissolved in water in the proportion of three parts (by weight) of the former to two of the latter, and boiled a minute or two, forms a cheap and excellent bee-food. It is best administered by means of an inverted bottle, the mouth of which should be tied over with a bit of coarse lino, or cap net, and the bottle-neck inserted in the hole which often exists, or, if not, can be easily made with a sharp penknife, in the crown of a common hive. The bottle, which must hold at least a pint, should be refilled every evening until the hive attains a sufficient weight to stand the winter. No time must now be lost, as the entire supply ought to be given before winter sets in.

CANARY MANAGEMENT (*Trotter*).—The cause of young Canaries pecking their feathers arises from the want of amusement to draw their attention. Hang several small swings in the cage, and some pieces of cuttle fish and millet seed, which will amuse them; also throw a little mawseed at the bottom of the cage; give likewise a little green food. If you find that will not cure the pecking, separate them for a short time until they have well recovered from their moulting. Canaries will not stand cold below 46° Fahr. To colour breeding cages, put a piece of lime in a basin, and add hot water to slacken it, let it be about the consistency of cream, and put it on with a hard brush. Some persons use whitening with a small quantity of size.

SKYLARK'S BEAK GROWING TOO LONG—EFFECT OF FOOD ON PLUMAGE (*K. P.*).—There is no remedy for preventing the growing of the upper or lower beak of the Skylark. In your case nothing can be done but to cut it, taking care not to cut the quick. If the food of the bird is changed and less hempseed given, the natural colour will most probably be restored at the next moulting season, if the bird be in the open air; if not, it is very doubtful if the colour will alter. Young cock bullfinches show the red feathers on their breasts in their first moult. Early birds should new show their colour.

DESTROYING INSECTS IN BIRD CAGES (*E. Smith*).—Turpentine would destroy the insects, but would be injurious to the Canaries. Clean the cages and give them a good wash of benzine, which would destroy all vermin. Place them in the open air until the smell goes off before replacing the birds.

* Sir Wm. Jardine, in the volume on "Bees," of "The Naturalists' Library," states that "upwards of forty different species are described as inhabitants of Britain."

WEEKLY CALENDAR.

Day of Month	Day of Week	OCTOBER 24—30, 1867.	Average Temperature near London.			Rain In last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.	
			Day.	Night.	Mean		m.	h.	m.	h.	m.	h.	m.	h.				
24	T ^H	Length of Day 8 h. 21 m. Royal Horticultural Society, Promenade. 19 SUNDAY AFTER TRINITY. ST. SIMON AND ST. JUDE.	56.1	39.4	47.7	18	41	a f 6	44	a f 4	47	a f 2	44	a f 3	27	15	41	297
25	F		58.3	38.5	48.4	19	43	6	46	4	59	3	11	4	28	15	48	298
26	S		58.0	36.8	47.3	17	44	6	44	4	10	5	27	4	29	15	54	299
27	SUN		55.1	39.0	47.0	25	46	6	42	4	20	6	4	5	●	16	0	300
28	M		54.5	36.3	45.6	24	48	6	40	4	28	7	31	5	1	16	5	301
29	Tu	53.8	35.4	44.6	19	50	6	38	4	33	8	7	6	2	16	9	302	
30	W	54.9	38.2	46.6	20	51	6	36	4	34	9	44	6	3	16	13	303	

From observations taken near London during the last forty years, the average day temperature of the week is 55.8°; and its night temperature 37.7°. The greatest heat was 68°, on the 24th, 1833; and the lowest cold 23°, on the 24th, 1833; 28th and 30th, 1836; and 29th, 1842. The greatest fall of rain was 1.06 inch.

CROSSING DIFFERENT VARIETIES OF FRUIT IN 1867.



HAVING had the advantages here of a glass-cased wall, used as an orchard-house, and containing nearly three hundred fruit trees of different kinds in pots, I have

this spring devoted some time to crossing the best varieties of Peaches, Pears, Plums, Cherries, and Apples.

The trees on the back wall are planted out in the border, and consist principally of Peaches and Nectarines, with a few trees of the best sorts of Cherries and Plums. All the kinds have borne excellent crops this year, and the fruit was of large size and of good flavour. The Walburton Admirable Peach is still (October 14th), in season, and some young trees of the Salway Peach will keep up a succession for a month longer. The fruit trees in pots are placed in front in a row of nearly 800 feet in length, and being secure from the effects of spring frosts and heavy rains, the fertilising the blossoms operated upon with plenty of good pollen was easily accomplished. All the different trees were accurately labelled, and the names of the sorts which furnished the pollen were put on small labels, and tied to the branch below the fruit where crossed.

Commencing with the Peaches on the back wall, *Violette Hative* and *Royal George* were crossed with the *Malta*, a medium-sized pale-coloured Peach of the *Noblesse* type, but one of the most juicy and delicious-flavoured of all the Peaches grown here. *Walburton Admirable*, an excellent late pale-coloured Peach, was crossed with the *Purple Peach of Angers*, a very large high-coloured French Peach. A very fine large Peach, under the local name of the *Ossington*, is grown in the midland counties, and this variety furnished me with pollen to fertilise the blossoms of the *Violette Hative*, *Galande*, and *Barrington*. The *Monstrueuse de Douc*, one of the largest of French Peaches, I crossed with the *Barrington* in 1865, and have now some seedlings from that cross, which will fruit in a year or two.

With respect to Nectarines, I have not attempted to raise new sorts; for it is almost impossible to hope to raise a finer or higher coloured variety than the *Elnge* when well grown. I have grown a seedling raised from it for the last five years, and nearly identical, but if anything darker coloured. Mr. Rivers's new Nectarine, the *Victoria*, also leaves nothing to be desired in seeking further for a juicy and high-flavoured late-keeping variety; and then we have the *Downton*, the *Pitmaston*, and *Stanwick*, all first-rate sorts.

With Pears in pots, I began crossing the *Citron des Carmes* with the *Doyenne d'Ete* and the *Yat*, a small per-

fumed early Pear. The *Suffolk Thorn* and *Marie Louise*, both high-flavoured Pears, furnished pollen to fertilise the blossoms of *Beurre Musque*, *Beurre Giffard*, and *Flemish Beauty*. *Louise Bonne* and *Vicar of Winkfield* I crossed with *Van Mons Leon Leclerc* and *Beurre Clairgeau*. *Leon Leclerc de Laval*, a variety that will keep as hard as a stone until June or July, was crossed with *Beurre de Rance* on purpose to try and raise a very late-keeping variety with melting qualities. The largest of all melting Pears, *Grosse Calebasse*, was crossed with *Van Mons Leon Leclerc* and *Beurre Clairgeau*.

With Cherries in pots, I only crossed the *Black Tartarian* with *May Duke*, and the *Bigarreau Napoleon* with the *Cleveland Bigarreau*, which is an excellent American variety.

Having a large collection of Plums grown in pots, some of the largest and best varieties were crossed as follows:—*Goliath* with *Kirke's*, *Cox's Emperor* with *Kirke's*, the *Jefferson* with *Washington* and *Victoria*, *Coe's Golden Drop* with *Magnum Bonum* and *Cloth of Gold*, *Prince Englebert* (an excellent large purple Plum), with the *Orleans*, *Pond's Seedling*, and *Felleberg*.

The few Apples grown in pots consisted of the best-flavoured varieties, and were crossed as follows:—The *Ribston Pippin* with the *Margil*, one of the best-bearing and richest-flavoured sorts, and the tree free from canker; *Keddleston Pippin*, an exceedingly rich and brisk-flavoured Apple, with *Cox's Orange Pippin*; the *Northern Spy* with *Court of Wick* and *Cox's Orange Pippin*; and *Cox's Pomona* with the pollen of *Gloria Mundi*, taken from a tree in the borders. The fruit of this cross are very large and high-coloured, some of them measuring 13 and 14 inches round.

With both Apples and Pears I have found the fruit crossed with large vigorous varieties to be larger in size than those on the same bushes uncrossed. I mean to grow the stones and seeds of all the above kinds of fruits in pots, on purpose to confine their roots to make them fruitful as soon as possible, and the most promising will be grafted or budded on established trees on the walls or borders.—*WILLIAM TILLERY, Welbeck.*

THE PEACH SEASON.

THE sudden change in the temperature forbids us to hope for much success in maturing good autumnal Peaches this year. October sorts are always uncertain in quality in our latitudes; nor, if you take up the leading continental catalogues, will you find many even cultivated at this late season. For example, in a catalogue before me, I find that out of about 140 sorts only fourteen are October varieties. Of these two are recommended as good and reliable (which they really are), three as occasionally so (in exceptionally warm seasons, and when well attended to), and the rest are rated as "third quality"—that is to say, for I know them mostly, that they are uneatable, and of no value whatever, at least in Europe.

Our list for orchard-houses is better than this; and where the temperature can be regulated many fine sorts can be

grown, so as to retain a certain place by the side of juicy Pears and ripened Grapes without much discredit. Still, the true well-wisher of the Peach would do well to hesitate before he essay too rude a competition with the other seasonable treasures of the fruit garden. Only a very few Peaches, and these of one or two well-trying sorts, should be grown in October. As I write there are before me several such. The best of these by far is the Comet Peach. From one bush tree in a pot I gathered three fine dishes, many fruits being 9½ inches round, and well coloured, abundant in juice, and having a rich Apricot flavour—surprising considering our damp and sunless summer here. Another of Mr. Rivers's seedlings, named Golden Royal George, raised from Royal George, but very different, is an excellent late variety, coming in before the Comet. Admirable Janne is a well-known autumnal Peach in France, and ripens well here during the month of September. I should think that in many English houses it would become a showy early October sort.

I am partial to Clingstones, those productions of more sunny lands, and so sweet, yet as hard as Apples when ripe quite through. One variety I have, wrongly named, but it is immense, showy, and excellent. Mitchell's Mammoth is another "cling," as the Americans say, and is prolific, and a good very late Peach—too late for general culture.

Of well-known late Peaches I can only say that Téton de Venus cannot be ripened in these islands from the open wall—that is, to be depended on, though some fifty years ago it was well known here. I was compelled to destroy it on the wall, and in the orchard-house it was worthless. So are Desse Tardive, which I have still, and Chancellor, a miserable Peach. Barrington and Late Admirable, however, succeed well under glass. Walburton Admirable I found too shy a bearer to be of use; and now such Peaches as Princess of Wales and Lord Palmerston are very much finer and more profitable, so that the older sorts are not missed.

Of Nectarines our latest was the Stanwick. This hangs fairly, but always has cracked here. Stanwick Seedling (Rivers), has not this defect. It is earlier and smaller, but has the true aroma, and I like it very much. Stanwick was really superb this season, as large as 9½ inches round, not well coloured, but juicy and rich. The Victoria was also very large and good, highly coloured, and showy. I confess to a weakness for colour in fruit—by which, however, is not meant a "peoples' Peach" colour, which, though fine, is not superior to it if even equals the gorgeous hues of the orange and maroon-striped fruits. Very late Nectarines of fair quality are yet to be desired. Peterborough is not worth growing.

So much for the late fruit. As to the early varieties, now so numerous and good, it is almost impossible to speak, except at too great length. Let me, however, mention some of the most striking and valuable. Here let me recommend amateurs to increase their stock of early kinds rather than of late ones. It is obvious that earliness is a precious quality, and these will never fail to be acceptable; while, as I said before, a late Peach, however well grown, has a sore trial to undergo when Grapes and Pears are in good season. Some of the gorgeous highly coloured Pears exhibited in Paris would tempt us far more than pale late Peaches as we must grow them. Not that Pears do not succeed admirably in orchard-houses. Those who like this fine fruit, or have abundance of room, can have Pears from potted trees in perfection, as also Plums, but in either case it is best to have these in houses apart. One great mistake in orchard-house culture has been the attempting to grow almost everything in the same house. For some time this plan may succeed, and, in certain cases, even tolerably well; but the better way by far is to keep Peaches and Nectarines entirely by themselves. Of course this is not always easy to do; but now let us return to early Peaches.

Early York Peach will long remain a favourite sort. It ripens freely, bears well, and colours well. The flavour is always to be depended on. Here, this season, the fruit attained nearly 9 inches round, a huge size for an early Peach. Early Silver is quite equal to Early York in these properties, and perfectly distinct in colour and flavour. It is a great advance. Early Grosse Mignonne is a good old sort, and so is Chevreuse Hâtive. Canary, an old favourite, did not quite reach my standard these two seasons, but may next year. Golden Purple has not retained its merits. Souvenir de Java ripens "second early," and is very promising. It is quite new, and was presented to me by Mr. Rivers to report on. The newest sorts of all, which ripened at Sawbridgeworth in July, will fruit here next season for the first time, and will, I expect, form a new era in our cultivation. I hope to have these sorts ripe by the

end of June without fire heat, and if they are of good size they will be of great value for Covent Garden. We send up from the middle of July, at present, in fair quantities. The midseason sorts are not remunerative enough, nor are the late ones. The produce was about 1400 this season, all fine, having been very much thinned; many trees being young, or of new sorts, not bearing at all. Out-door Peaches are valueless to us. As I always thin very much, the occasional reports of immense crops elsewhere are readily gauged at their proper value. One fine specimen is worth, commercially and artistically, a host of mediceries. Early Albert is a fine Peach, ripening two days after Early Silver. Crawford's Early is a little later. Hunt's Tawny has always been our earliest Nectarine. Its average time of ripening for the last six years has been the 28th of July. I must omit the midseason varieties now.

The crop in general was fair, but the flavour was slightly inferior. The same is the case, as far as I can learn, in England, and is due to our humid and cloudy summer. We had fewer insects, but more mildew on the glandless Peaches than usual, both in the houses and on the open wall. Vines in houses facing east suffered also more from mildew than usual. I have seen none in houses with a full south aspect. On the open wall there was some red spider, but little in the houses, and the foliage in them was never so fine. Abundance of water was given at the roots, but less syringing over the leaves during such damp weather. The fruit was never before so large on the whole. Noaphides. There is a little scale just now, proceeding from some pernicious Orange trees in pots, but this will be cured shortly.

On a single day during the height of the season, twelve or fifteen varieties of Peaches and ten of Nectarines were ripe together, forming rare dishes of fruit. This is one triumph of the orchard-house, and no mean one whenever a display is required. On another occasion, for some local ceremony, a basket of Exquisite and other similar large sorts had the place of honour, *longo intervallo*. I remember a dish composed thus—Stanwick, pale smooth green skin, slashed with pink; Comet, dark apricot ground with maroon streaks; Shanghae, pale ground with lake dots; Seedling Peach No. 10 (Rivers, and unnamed), immense, pale ground with mottled carmine dots; a Peach unknown, deep orange, with broad stripes of reddish lake; and Colombia, yellow ground, with dull lake stripes all round, an orange nipple, most quaint, and with such long downy hairs as to give it a Plum-like look. This was indeed an artistical combination in colour, when enshrined in pale young Vine leaves. Could we have obtained a little of that precious sunshine which reddens the fruit of mid-France it would have been far more glorious. We do very well as it is; nevertheless, I for one rather envy our neighbours this privilege.—T. BRÉHAUT.

ROSES CÉLINE FORESTIER AND MADEMOISELLE ARISTIDE.

I SHOULD feel greatly obliged by advice as to the management of a Céline Forestier Rose. It was planted in the autumn of 1865, against a wall with a south-east aspect. The soil in which it was planted was a stiff loam with a clay subsoil, the loam being enriched with decayed cowdung. The Rose has had manure waterings—namely, the drainage from the stable diluted with water, and the result is, it has made plenty of wood which has been nailed to the wall, covering a good space. All the weak-growing foreright shoots were cut-in to three or four good buds. This year the shoots from them are from 3 to 4 feet long and much mildewed, and we have had a few ragged and very thin flowers. It is budded on a half-standard Briar stock. The situation is shaded from the sun by the house after 2 p.m., but very open.—W. B.

[Céline Forestier and Madlle. Aristide (the same, I believe, as Madame Schultze), are two of the hardiest and strongest-growing Tea-scented Noisettes known. Neither of them, as a rule, shows a disposition to flower abundantly till it has been planted two or three years, and has made much matured wood. Tea-scented Noisettes (these two less than others), do not like much cutting. As "W. B." has heavy soil, and has highly manured his ground with decayed cowdung, I advise him to keep his knife quiet as regards the tree, to withhold all manure, at any rate till after buds are formed, to root-prune moderately, and to mix an abundance of coal ashes with the soil around the roots. If this treatment be pursued and fail, there can be only one other cause of failure—namely, a want of free-drainage.

In such case he will do well to dig a dry well in front of the roots, and fill it with flints, and then cover them over. Tea and Tea-scented Noisettes like good land made light, free drainage, a West Indian sun, and plenty of water; but they do not like, nor does any Rose like, water lying at the roots. All Roses like plenty of water poured over the foliage and roots in sultry weather, and from time to time, but they do not like being in a swamp.

I cannot account for the poverty of "W. B.'s" flowers, except by the coldness of his ground. I have a large and splendid stock of Tea-scented Yellow Noisettes here, in the open ground and against walls—Cécile Forestier, Triomphe de Rennes, Gloire de Dijon, Maréchal Niel, and Isabella Gray, and no Roses can beat them for good results. I may say, in conclusion, the Briar suits the Maréchal admirably. Isabella Gray is on her own roots, and has given splendid and more golden blooms than her beautiful son. Maréchal Niel is a very hardy Rose, and makes firm wood with a good tough skin.—W. F. RADCLIFFE.]

VARIORUM NOTES.

ORCHARD-HOUSE CULTURE—ROOT-PRUNING, &c.

IN No. 341, page 272, Mr. Rivers modestly asks a question—"How is it that Peach trees planted in ground as hard as a threshing-floor are fat and flourishing?" I venture to suggest that he has answered his own question when he tells us "The borders are of a dense calcareous earth." This being the case, it appears to me that the large amount of carbon contained in the soil is the real cause. I should like to know if they are as fruitful as vigorous. When fruit trees produce "*gourmands*," I suspect they are in a soil more favourable for forest than fruit trees. No pruning will keep such a tree in absolute subjection. Trees that are over-fed are subject to these suckers, not feeders, which produce nothing but leaves—the melancholy condition of the Fig tree which is not in its proper situation and element. My remedy is not altogether root-pruning, although large wood-roots and strong wood-shoots generally go together, but ranning down the subsoil and giving it a foundation of broken stones not deeper than 18 inches.

My experience agrees with the remark of a correspondent as to the cause of stone fruit falling being want of water at the right time. Water being so large a constituent of plants, we must supply artificially what Nature withholds. I have watched the rapidity with which a newly planted drooping Laurel absorbs the contents of the waterpot, the hanging leaves speedily becoming erect. The sap of plants being a solution of various matters, it is evident that the best mode of administering nourishment is by liquids, and, therefore, as Mr. Rivers observes, top-dressing potted trees is not so good as watering; and there can be no question that our pots are too deep. I have long advocated shallow pots or pans to give the roots more room for horizontal growth. Mr. Rivers remarks that the roots come to the surface to receive their food. I do not think he has correctly expressed himself; with all due deference I say it. Nature, ever watchful and mindful of her offspring, forms roots near the surface to correct deficiencies arising from unnatural modes of culture. On the road from Devizes to Potterne is a cutting through green sand. On the top of the bank, 10 feet above the foot-path, are some stunted Firs, the roots of which, in search of congenial food, force their way through crevices down to the roadway, throwing out on their passage innumerable rootlets, by which they imbibe moisture only; but the growth of the trees is scarcely progressive until the roots arrive at loam. Large masses of sand are frequently detached by the agency of these wooden wedges.

Your correspondent, "C. I. M.," asks the cause of cracked Pears. I have seen them this year in the house and out of the house. I attribute the cause in the house to a lack of root moisture, and out of the house to uncongenial soil. I never saw the Beurré Diel subject to it; but another tree growing side by side always had cracked fruit; the soil was a sort of hard sandy clay. It is an evident sign of defective nutrition.

The following facts respecting Pear trees may interest some of your readers. I was telling a friend at Devizes the benefits that sometimes attend the root-pruning of Pear trees, by which barren trees become fruitful. "Well," he said, "I can corroborate what you say, for having occasion to enlarge my premises I removed a Pear tree that never bore, cutting off the roots and head. It was set up in the garden for a clothes pole; there it sent out roots and formed a head, which bore fruit of

an excellent quality." The following is another instance. A friend called upon me respecting a barren Marie Louise Pear tree of mature growth. I advised him to make a circular trench round the tree, to cut off the large wood-roots, fill up with rubble of any description, and not to shorten the boughs. He did so, and has since had abundant crops. The luxuriant wood-growth being checked, I apprehend the sap is diverted into the fruit-buds. I speak only of standard trees. I am not certain whether the same treatment would suit espaliers. I have tried it, but did not remain to see the result.—EXCELSIOR.

THE PARIS UNIVERSAL EXHIBITION.

ALTHOUGH I have notes on many subjects and places which sooner or later will, I hope, find a place in the Journal, yet, as I have just been again to the Paris Exhibition, and seen the *jardin réservé* under a different form from that which it presented in May last, perhaps a brief notice thereof may not be without interest; and as I, out of the reach of the Journal, do not know whether I may not have been anticipated, especially as I am aware one of the Editors was to be there about the same time—mindful of this, I shall say as little as need be of the department on which he is one of the first, if not the first, of authorities in England.

Whether it was the last "*caneours*" or not, or whatever one it may have been, there was an unusual collection of subjects brought together, and all the various houses were filled with the different productions the horticulturists of France had sent in. Before noticing them, let me say that my opinion of the *jardin* itself is in no way altered. It looks infinitely better than it did in May. The grass is admirable, and does great credit to the Messrs. Carter, who selected the seeds for it, for they are evidently the very best for the purpose. The trees look green and well, but the same faults strike one still—the number of buildings crowd it up too much. The aquarium is out of place, and a great "sell" into the bargain, for there is nothing of any interest in it—not half so much as in the "grand aquarium" on the Boulevards, or in our own aquarium at the Regent's Park; in fact, it seems to have been got up for the express purpose of advertising the firm which has supplied the rockery, and there is altogether a cockney look about it; and Paris cockneyism, if not quite so *outré*, is as objectionable as London cockneyism.

With regard to the Fruits, which formed the major part of the Exhibition, I do not think that I have ever seen so large a collection of Pears and Apples brought together. On mentioning this to my friend Mr. Smith, of Worcester, his reply was, that his recollection of the great show at St. James's Hall some years ago was that it was larger. At any rate, Apples and Pears of all kinds were to be met with on every side. Not only was the vestibule of the great conservatory filled, but several smaller houses also. What their quality is, I cannot say. One thing, however, struck me as noticeable—viz., that the different pomological societies, as we should call them, sent up collections contributed by their various members, not as individuals, but from the society. This undoubtedly gave them an opportunity of making a finer display, and at the same time contributed to that *esprit de corps* which is nowhere stronger than in France, and which not very long since successfully resisted the removal of the effigies of the Plantagenets from Fontevault to England, because they belonged to the department. Even although the offer had been made by the Emperor himself to the Queen to give them to the English nation. The other fruits did not strike me as particularly fine. There was a large collection of Grapes; also a small one of Peaches, Pine Apples, &c. As the Grapes were mostly from the open air, they were mainly such as are used in the vintage, with the exception of the Chasselas de Fontainebleau and the Frankenthal; but I fancy none of these, even, were so fine as those I saw afterwards at Fontainebleau itself. Our countryman, Mr. Knight, of Pontchartrain, contributed the finest Grapes there, grown according to the English method, and elicited great approval from many of the French exhibitors.

I was indebted to the Exposition for a sight which I had not at all anticipated—a sight of M. Souchet's Gladioluses; for in prospect of this he and other growers had kept back some of their bulbs and did not plant them until the end of June, and the result was a sight worth coming to Paris to see. Three collections were staged—namely, those from M. Souchet, M. Eugène Verdier, and M. Loise. They were shown in bottles plunged in sand on the ground, so that you looked down on

them. They were placed very close together, which, while it added to the effect, certainly did not add to the comfort of those who, like myself, wished to examine them individually. Let me say that I have never seen such a collection as M. Souchet staged. There must have been three hundred spikes, and each spike in itself perfect. As I had afterwards an opportunity of seeing some with M. Souchet himself, and had a talk with him about them, I hope ere long to enter more fully into the subject, especially as this year the greater part of my collection has perished by a disease as unaccountable as the Potato disease. M. Eugène Verdier's collection was good; but there was as great a distance between him and M. Souchet as we see sometimes in England in exhibitions between the first and second collections. Growers of *Gladiolus*, as I have before mentioned, must bear in mind that M. Souchet does not sell except to four or five Paris houses, and must obtain the bulbs through them. Of these houses, the Verdiers, Eugène and Charles, are well-known distributors of M. Souchet's varieties.

I may also say that, fine as some of M. Souchet's *Gladioluses* of last year were, they are quite eclipsed by some of the present season, which are perfect marvels of beauty. We are sometimes reminded how much better things are shown in France, and Roses are taken as an example of this. All I can say is, I have never seen it; and the Roses exhibited were neither in themselves nor in their "setting up" to be compared to those shown at the Crystal Palace about a fortnight before. They were placed in long, zinc, semi-circular tubes, and were to my mind slovenly in the extreme. None of the new varieties were shown, and very few even of those of last season. Dahlias were there too, but such flowers! There was not one in the lot which obtained the first prize that either Mr. Turner or Mr. Keynes would have admitted into his stands. Green eyes, sunken centres, flat plates prevailed, while there was no order or regularity in the matter of placing them in the stands. They were shown in a sunken frame in moss, and were altogether very inferior. Not so, however, the double Zinnias. I do not know what became of the first and second collections, for I searched in vain for them; but in the third "exhibit," as it is now called, there were some really splendid double flowers, especially in scarlet and yellow; and if the others were as far ahead of these as M. Souchet's *Gladioluses* were of the rest, they must have been fine, as, indeed, I was informed they were. It will thus be seen that, as far as my judgment goes, there were only two flowers in which we were surpassed by the French exhibitors, and in one of these by one exhibitor only. The Zinnias were probably due to the climate; but I do not see why we should be behindhand in the *Gladiolus*, so "Excelsior!" must be our cry; and if more encouragement were given to them perhaps we should see better results.—D., *Deal*.

WHITE ZONAL PELARGONIUMS.

I SEE at page 253 you have recommended Purity and Virgo Marie as our two best White Zonals, and "D., *Deal*," at page 234, speaks of Purity as the only advance on Madame Vaucher. My experience of it has been quite the reverse. I had two good plants of it which I shifted into 10-inch pots. One of them I planted out, and I kept the other for the conservatory, but it is now on the rubbish-heap.

In the beginning of June every point appeared to be throwing up a flower-truss, but as time went on, and it should have been in flower, only five or six trusses came the length of flowering, and miserable they were, with only a dozen flowers at the most, and those with serrated edges.

I kept it on till August with no better success, when I discarded it; but the one I planted out has done very well. Still, the trusses are poor, having only from half a dozen to a dozen flowers on each. The habit out of doors is good, but in-doors the plant is very leggy.

Upon the whole, I count Madame Vaucher superior, both in flower and habit, as a pot plant, and in flower superior to Virgo Marie; but I consider the latter has a better habit, and flowers fully as freely.—G. McD.

MONSTER PEARS.—There were exhibited in the shop of Messrs. Le Cornu, seedsmen, St. Heliers, Jersey, last week, four Chautmont Pears which for size and beauty excelled any hitherto known in Jersey, renowned as that island is for the quality of its Pears. These four specimens weighed respectively 19½,

21½, 24½, and 30½ ozs., making the almost incredible total weight of 96½ ozs.! The three first mentioned, weighing 65½ ozs., had grown on a single eye. They were grown in the grounds of Mr. G. H. Horman, Her Majesty's Solicitor-General for the Island of Jersey.

CULTURE OF ROSES ON THE MANETTI STOCK.—No. 5.

LET me hope that the preceding observations, which are the result of long, extensive, and expensive experience, may advance the Rose cause and create better rosarians. By rosarians I do not mean possessors of large stocks and good ground, nor do I mean simply winners of Rose prizes, but workers. A constant succession of noble Roses throughout the season requires great labour, but "*Labor omnia vincit*."

I will now give a list of the best Roses in each family.

SUMMER ROSES.

These are now to a great extent superseded by Hybrid Perpetuals, Tea Roses, and Tea-scented Noisettes; still, some of them should be retained, as they have not yet been matched. They are very hardy, and useful for bouquets, as cutting them for flowers does not injure their future prospects. I do not recommend them to persons who have only room for a few Roses. Hybrid Perpetuals are the best for them.

PROVENCE.—The Cabbage.

MOSS ROSES.—As Madame E. Ory is the only good autumnal Moss Rose, we must take the summer Moss Roses or none. The following are the best:—Common Moss, Gloire des Mousseuses, the finest; Lanei, a good pole Rose; Nuits d'Young, Baron de Wassenau, Captain Ingram, Vandael, White Bath, and, curious, W. Lobb.

DAMASK.—La Ville de Bruxelles, Madame Soëtmans, one of our finest white Roses. I keep only this and Schismaker, which is of a pure slate colour.

GALLICA.—I name first two of the best variegated Roses that we have. These are Éillet Parfait, rather tender, but extra fine; and Tricolore de Flandres, large and beautiful; others being Boule de Nanteuil, Kean, La Volupté, Triomphe de Jaussona, and Schismaker, pure slate.

HYBRID CHINA.—Général Jacqueminot, and Madeline, variegated.

HYBRID BOURBON.—Charles Lawson, Coupe d'Hébé, and Paul Ricaut.

AUSTRIAN AND BANKSIAN ROSES are now superseded by such fine autumnal yellow Roses as Solfaterre, Gloire de Dijon, Triomphe de Rennes, and Maréchal Niel, which is blooming well and growing finely on briars in my gardens. It is a glorious Rose.

AUTUMNAL ROSES.

MACARTNEY.—Maria Leonida, very beautiful, but not a show Rose. It is a creamy white, with a blush centre, and vermilion stamens.

PERPETUAL MOSS.—Madame E. Ory.

PERPETUAL DAMASK.—Mogador, a fine hedder when on the Manetti.

HYBRID PERPETUALS.—Some of these, no doubt, will be superseded in due time. They are, however, good, and the best at present. Achille Gonod; Alfred Colomb and Charles Rouillard, the best two of their year; Alfred de Rougemont, Alpaide de Rotalier, Alphonse Belin, Anna Alexieff, Auguste Mie, a fine autumn Rose, Baron Adolphe de Rothschild, Baronne Pelletan de Kinkelin, Baronne Prevost, Beauty of Waltham, Bernard Palissy, Black Prince, Camille Bernardin, Caroline de Sansal, Charles Lefebvre, Charles Wood, Comte de Nanteuil, Comtesse de Chabrillant, Dr. Andry, Duc de Cazes, Duc de Rohan, Duchesse de Caylus, Duchesse d'Orléans, Duke of Wellington, Dr. Spitzer, Empereur de Maroc, Eugène Verdier, François Lacharme, Gabriel de Peyronny, Général Jacqueminot, George Priuce, Gloire de Ducher, Jean Cherpin, fine colour, not full; Jean Rosenkrantz, John Hopper, John Keynes, Jules Margottin, Lady Suffield, La Duchesse de Morny, La Ville de St. Denis, Leopold Premier, Lord Clyde, Lord Macanlay, Madame Boll, Mad. Boutin, Mad. Charles Crapelet, Mad. Charles Wood, Mad. Clemence Joigneaux, Mad. Emain, Mad. Fillion, Mad. Freeman, Mad. Julie Daran, Mad. Knorr, Mad. Moreau, Mad. Rivers, Mad. Victor Verdier, Mad. Vidot, Maréchal Vailant, Marguerite de St. Amand, Maurice Bernardin, Monsieur de Montigny, Pierre Notting, Prince Camille de Rohan, Rushton Radclyffe, Sénateur Vaisse, Souvenir de Dr. Jamain, very beau-

tiful; *Sacré des Anges*, *Souvenir de W. Wood*, *Souvenir de la Reine d'Angleterre*, *Triomphe de Paris*, *Victor Verdier*, and *William Griffiths*.

BOURBON PERPETUAL.—Baron Gonella, Baronne de Maynard, Louise Margottin, Marguerite Bonnet, a nice fleshy white Rose, with fine growth and foliage.

BOURBONS.—*Acidalie*, Dupetit Thouars, *Souvenir de la Malmaison*, Queen, distinct; Sir J. Paxton, for poles.

CHINA.—Mrs. Bosanquet.

TEA-SCENTED NOISSETTES.—Gloire de Dijon, *Triomphe de Rennes*, Celine Forestier. These are three of the best Roses in the Rose kingdom. They will do well on briars, on the Marnetti, or on their own roots.

TEA ROSES.—Adam, Devoniensis, Elise Sauvage, tender; Vicomtesse de Cazes, tender; Madame Willermoz, *Souvenir d'Elise*, *Souvenir d'un Ami*, Rubens, Sombreuil, a good Rose, not equal to Madame Willermoz, but it is the hardiest Tea Rose known; and Maréchal Niel.—W. F. RADCLIFFE.

WINTER AND SPRING FLOWER GARDENING.

The flower garden is in most cases so situated that it can be seen from the mansion, and is, therefore, more immediately under the eyes of the occupants than other parts of the grounds. This alone renders its management of the utmost importance, and its appearance should at all times be as gay and interesting as possible. The prevailing system, however, is to direct all the time and attention towards the production of materials for a summer display; and when that is over the flower garden is a blank for eight months in the year, and at a time, too, when decoration is most required. Any attempt to render it more attractive in winter and spring is, therefore, likely to be appreciated; however, the subject is receiving considerable public attention, and I anticipate that the decoration of the flower garden at these seasons will become, as it deserves to be, of as much importance and as popular as that of the summer parterre. I believe many attempts have been made in various ways to carry out what I am endeavouring to advance; and in some of the largest gardens in the country, where no expense is spared, and soil and situation are favourable, the results have been highly satisfactory; but as it is not possible for all to receive the encouragement alluded to, I offer a few remarks on a method adopted here, which has so far given satisfaction, and, as far as expense and trouble are concerned, can be adopted by the most scrupulous.

I will first proceed to give a list of the materials used, and afterwards their culture and propagation. In the first place, the beds are all edged with Snowdrops and Crocuses of various colours, the colour of each edging properly labelled. Those, not interfering with the summer plants, remain permanently. The most prominent beds are planted with hardy evergreens, such as variegated Aucubas, variegated and green Enonymus, *Thuja aurea*, gold and silver variegated Hollies, variegated and green Box, *Yucca filamentosa*, and *Berberis aquifolium*, and even the common Laurel takes a place. All these vary from a foot to 2½ feet high, to suit the size of the beds and the ideas of the planter. Then come Hyacinths and Tulips of various colours, planted among the evergreens either singly or in patches of a dozen or more, and as spring advances the bulbs enliven the beds to such an extent as to make them objects of interest and beauty.

It may be thought that the use of evergreens gives the garden a nursery-like appearance; but I cannot perceive how they can be dispensed with if the beds are to be clothed in mid-winter, for they give an immediate effect, and afford protection to the bulbs planted amongst them. They also allow of the use of some of the doubtful hardy white-leaved plants, such as *Cineraria maritima*, with less risk from frost. For instance, plant a bed with the small *Thuja aurea*, 1½ foot apart, and cover the ground with *Cineraria maritima* pegged down. The former protects the latter, and a few Tulips dotted over it have a pretty effect.

The remainder of the beds in which evergreens are not put are filled with such plants as Wallflowers, *Alyssum saxatile compactum*, *Viola cornuta*, *Iberis sempervirens*, *Myosotis sylvatica*, Cliveden Pansies; red, white, and rose Daisies, mixed Polyanthus, the pretty little *Aubrietia deltoidea*, lilac Primroses, and the common one, which also makes a showy bed. All these are quite hardy, and bear moving well from time to time. A few annuals are also used, such as *Nemophilas* of eorts, *Collinsia bicolor* and *verna*, *Limnanthes Douglasii*, and

Silene pendula. *Saponaria calabrica*, *Lasthenia californica*, and others might be added; but in the selection of materials for this branch of gardening it has been my object to choose those which I have proved to be hardy, dwarf in habit, and early flowering, that will move well at any time, and which can all be produced in any quantity without the aid of glass.—THOMAS RECORD, *Hawkhurst*.

PROPAGATING GOLDEN CHAIN PELARGONIUM.

I WAS much pleased to learn the success attending "R. E.'s" experiment in propagating this charming flower garden plant, but in my opinion there are a few circumstances to be considered by amateurs and practical gardeners before they can adopt the plan recommended by him. Where will you find an employer who has been at great expense in having his flower garden filled in the first week in June, begin to cut it up in the last week? And, on the other hand, where are your cuttings to come from, unless you take the half of the plants you planted out only three weeks before, if the seasons are not much milder in Yorkshire than has been the case here, in Oxfordshire, for the last few years?

I have not the least doubt but the plan is a good one for propagating the Pelargonium for which it is recommended, but there are other modes of increasing this plant equally good, and at the same time prolonging the season of the plants in perfection.

Here we never commence propagating till the last week in August, and at the present time we have as fine cuttings of Pelargoniums as could be desired.

Golden Chain I do not employ much, finding Golden Fleece better adapted for all purposes. My mode of propagating is not unknown to "R. E."—JAMES STEWART, *Nuneham Park*.

[We shall be glad if you will state your mode of propagating Pelargoniums.—EDS.]

KEEPING ICE THROUGH THE SUMMER.

I WAS thinking of having a deep hole dug in my garden sufficiently large to hold twenty earloads, which would be about the quantity I should require. I should have the hole bricked up and brought up to a dome at the top, and a lid about 20 inches from the top. I should then fill up with sawdust, and have another lid to close up level with the surface of the ground. Over all I should have a small thatched roof to keep off the sun. As my demand on the ice would be perhaps every day, would the air that must get to it waste it very fast? Suppose, I say, I fill a house or pit with twenty loads, each load weighing a ton, I shall then have 400 cwt. Is it possible to go two hundred successive days, and take out each day 1 cwt., and allow the other 200 cwt. for waste?—A POOR COUNTRYMAN.

[Providing you can secure drainage for the well we think the plan would answer. Drawing daily supplies would lessen the ice more than anticipated. If you obtain one-fourth the quantity stored you may consider yourself fortunate. We think your plan good, but shall be glad of the opinions of others, now being a very good time for the ventilation of the question. Ice-keeping is every year more sought after.]

COWPER'S SUMMER-HOUSE.—A proposal having been made in the columns of the *Standard* newspaper, to restore Cowper's summer-house at Olney, Mr. W. H. Collingridge (of the *City Press*) writes:—"Correspondents have over-estimated the value of the names pencilled on the walls of the summer-house at Olney. Some of them are, it is true, 'familiar in our mouths as household words,' but I am very doubtful if all these are genuine, while the majority are unknown to fame, and many are undoubtedly of the class referred to by Cowper, when speaking of the Alcove. He says:—

'Not all its pride secures
The grand retreat from injuries impress'd
By rural carvers, who with knives deface
The panels, leaving an obscure rude name,
In characters uncouth and spelt amiss.'

"There are, however, no doubt, some autographs that are worth preserving; but it is obvious that to restore the summer-house, which is only a lath-and-plaster erection, in the way that has been suggested, would very effectually get rid of all

these signatures at a stroke. Nor is this renovation really needed. The late Mr. Anthony Morris, who held that part of the garden containing the summer-house (which was divided many years since from the dwelling-house, in which in all probability most of Cowper's productions were penned), took a just pride in keeping it in good order; and having been to Olney during the past month, I can testify to the fact that it is far from being in the ruinous condition that might be imagined from the statements made respecting it. If, however, it is thought desirable to raise a memorial to Cowper—and I as an 'Olney boy' certainly think so—why should not the suggestion thrown out some time since be adopted, and a memorial hall erected? Places that are identified in any way with celebrated men generally have something to show for the fact; and why should the town where 'Newton preached and Cowper sang' be worse off in this respect than others similarly situated? The inhabitants of Olney are not deficient in public spirit; and as the Earl of Dartmouth, who is the Lord of the Manor, has made a good start by offering £100, I venture to hope that ere long something tangible will be accomplished. The vicar and the ministers of the Independent and Baptist chapels would, I feel sure, be found quite ready to co-operate, and I would suggest that any one wishing to aid in the work would do well to communicate with those gentlemen. Mr. Osborn, the present occupier of the garden in which the summer-house stands, and Mr. John Sleath, the occupier of 'Cowper's House,' are at all times most obliging in their attention to visitors who may be desirous of seeing these classic spots.—W. H. C."

VINES AND VINE BORDERS.

YOUR correspondent "H. S." has shown in his attacks on my little work on the Vine a persistency that is worthy of a better cause. He seems disappointed that I have not replied to him; he should not be so, when he considers that he makes his attack from behind a couple of consonants that may or may not be even his initials. Masked though he be, and deserving the fate of all who have recourse to false colours when they attack an unoffending neighbour, I have no wish to appear discourteous even to "H. S.:" therefore I take up my pen once more, not with the view of following him into all the strange latitudes in which he delights to wander, but to meet him on those points where he imagines he impinges on what I have previously written.

I may here remark that "H. S." made no reply worthy of the name to my article in the Journal of March 21st of this year. He was forced to admit the truth of what I said about the Grapes of his favourite climates on the Continent being much inferior to those grown by me and thousands of others in hothouses in Britain; he denies, however, that what I said was correct when I wrote of the Vines in the valley of the Volga and of those on the south banks of the Rhine, that during certain periods of their growth, and certain portions of the day, they are subject to a higher temperature than I recommend for hothouses. I appeal to all conversant with such matters, and who have in this country ever tested the heat of a hot summer day against a south wall, as to which of us is the more likely to be correct in this matter; and be it remembered that the banks of the Rhine are little else than gigantic walls. I quote from an eminent British pomologist, who has recently been examining the French vineyards, and who writes to me from Paris as follows:—"There is a great mistake made by your literary opponent, in my opinion, when he takes the mean temperature of climate in illustration of his arguments in favour of lower temperatures than you give for ripening the Grape; why, in the south of France (in Languedoc), the direct rays of the sun beat for days on the bare skin of the Grapes when the temperature is upwards of 100°, and there the Muscat of Alexandria ripens in the open air." Does this Grape do so in mid or northern France? Certainly not, for in 1861 I saw Muscats at the great show in Paris in September that were little else than bags of sour water.

"H. S." justly charges me with having written in the first page of my book that a temperate climate is the most suitable for the cultivation of the Grape; but he entirely overlooks or shuts his eyes to the obvious fact, that I wrote of the cultivation of Grapes in hothouses, and not in the open air, which makes all the difference, and makes what I wrote perfectly consistent with the temperatures I recommended; and I prove their necessity by again challenging "H. S." to produce Grapes either grown in this country or in a foreign one at his tempe-

tures equal to those I will produce grown at mine. True, he tells us that Eschel atill produces Grapes in bunches of 10 lbs. and 12 lbs. weight; but that proves little or nothing in reference to the question at issue. Grapes nearly double these weights have been grown in hothouses in this country. It does not, however, appear that "H. S." has approached that standard yet; for he writes, "I have but little to say about my own Vines. The photograph of the roof of one of my houses, and the two small bunches I have sent to the Editors of the Journal, will be more satisfactory than anything I could write." The Editors, like cautious men, are, however, ominously silent either as to the excellence of the small bunches or the beauty of the photograph.

"H. S." is quite unjust when he attempts to fix me to a mean temperature between what I recommend the house should be shut up at in the afternoon, and the general temperatures I recommend. The maximum only lasts for an hour or so, whereas the minimum is the general temperature for twenty-three hours out of twenty-four. Any one with the least practical knowledge of such matters will see this at a glance; but "H. S." is either willingly blind to it, or he has too little discrimination in such matters to enable him to mark the obvious difference.

To say in the face of the experience of thousands that it must be injurious to a house of Muscats at midsummer, to be shut up at a sun temperature of 90° or 95°, with a view to husbanding that most genial of all heats for an hour or two in the evening, while the paths are sprinkled with water, implies no small amount of temerity. I have seen Vines in a house during a very hot day with a dry east wind, have their foliage quite flaccid from the great demand for moisture made on them, yet the leaves would become quite firm and crisp half an hour after the Vines were shut up as I have recommended they should be.

"H. S." in the Journal of the 17th of this month, after giving a quotation to prove that there were Vines in Judæa so large, that foals and asses' colts might with safety be bound to them (I can find him plenty of Vines in this country he might with safety tie a horse to), falls foul of my works in no measured terms; but happily he gives me half the gardeners in the country as companions in error—therefore, I am perfectly ready to accept the position assigned to me. Amongst the charges brought against me in this article of his is, that I recommend a period of perfect rest for the Vine; he ridicules the idea, and closes by stating that "rest can add nothing to its maturity," and that while the leaves are "still green," it is in the "best possible condition to support a new growth." This doctrine would startle Dr. Lindley, were he in life. At page 507 of his "Theory of Horticulture," he wrote with his usual perspicuity, "A gardener is said to rest a plant when he exposes it to a condition in which it cannot grow, and which is analogous to its winter state. For many parts of gardening, especially what relates to forcing, and the management of exotic plants, this is a subject of first importance." At page 511, after showing that, from one cause or other, plants in all parts of the world have, and require a period of rest, he writes, "It is, therefore, a condition necessary to the well-being of a plant, not to be overlooked under any circumstances whatever, and there cannot be any really good gardening where this is not attended to in the management of plants under glass." And again he writes, "The way in which the physical powers of vegetation are affected by this, has been already explained, and in practice it has been found a point of the utmost consequence. The early fruit gardener draws the Vines out of his vinery, and takes the sashes from his Peach and other forcing-houses when the artificial season of growth is over, in order to prepare them for the duty of a succeeding season." What does "H. S." say to this? Modesty well becomes a tyro in the presence of a veteran like Dr. Lindley.

"H. S." becomes all but furious at my having written that a Vine can have a quantity of stored-up sap in it. What says Dr. Lindley on this subject? At page 26 of the work already quoted, he writes, while showing that the roots of plants are never perfectly at rest, though the top is, unless when the soil they are in is frozen, "The whole tissue of the plant will, therefore, become distended with fluid food by the return of spring, and the degree of distension will be in proportion to the length and mildness of the previous winter. As the new shoots of spring are vigorous or feeble in proportion to the quantity of food that may be prepared for it, it follows that the longer the period of rest from growth the more vigorous the vegetation of a plant will become when once renewed, if that period is not

excessively protracted." Thus it will be seen that if I am in error, I am in good company.

I may now close this subject by remarking that I so far protected myself from attacks like those I have received from "H. S.," when I published my little book, by setting it forth as merely an epitome of my own practice. I neither attacked the theories or practice of others, nor did I profess to be the founder of a system. As such it has been well received by the Grape-growing public, and I never would have entered on any defence of it, had I not conceived that "H. S.'s" persistent misrepresentations of its teaching might mislead some of those who have purchased it, and for whose guidance it was written.—Wm. Thomson, Dalkeith Park.

CAULIFLOWERS IN AUTUMN.

At page 240 of "our Journal" a question is asked, "Can any one tell how to have Cauliflowers as fine and compact in September and October, as in May, June, and July?" Well, thought I, can any one tell us how to get May, June, and July weather in October? Amongst my acquaintances, I have heard it said, "Our people do not mind about Cauliflowers after the springtime;" but I am thankful that my lot has fallen among those who appreciate Cauliflowers all the year round when such are to be had.

Some years ago, the winter being very mild, I had the good fortune to have a supply throughout that year. Now, let us consider how to have a supply of Cauliflowers in September and October, and on to the end of the year.

I sow early in spring, at the foot of a south wall, a little seed of Grange's Autumn White Broccoli, and prick the plants out when ready; sowing more seed for succession, along with Walcheren and Early Cauliflower. I attend to pricking-out and moving, as the plants require, to the places where they are expected to head. By this treatment we are now having Cauliflowers that will pass muster, and I hope to have them to the end of the year, if the season should prove moderately mild. By that time I expect to have some early-sown Snow's Winter and Backhouse's Winter Protecting Broccoli ready to carry on the supply until the later spring Broccolis come in.

I treat my plants liberally, attending to watering when necessary, and am satisfied with the return.

I do not know that there is anything original in what I have advanced, but it is my practice, and what I have done others may or have done.

My autumn-sown stock of plants for spring is pricked out at the foot of a south wall, having very limited means in the way of cold pits, frames, or hand-glasses, and resorting to mats or branches for covering.

Last winter my plants had a good covering of snow upon them before the frost set in, and that was all the covering they had. These plants, removed with balls to well-prepared ground on a south border and other places, brought us fine heads till the spring-sown ones came in.

By the above means we have had a regular supply from the beginning of May to the present time, and, as I said before, should the season prove mild we hope to have a supply throughout the winter.—M. H., Acklam Hall, Middlesbrough-on-Tees.

PROLONGED HORTICULTURAL SHOWS.

In reply to "B. A.," page 255, allow me to observe, briefly, that I spoke with some reserve against plants remaining at exhibitions for several days, and am not inclined to insist upon the same rules being observed with them as with fruit, although I am doubtful if the bulk of the subjects exhibited can remain a week, with the usual protection afforded them, without being in "any degree" injured. On this point, however, I am willing to abide by the verdict of exhibitors themselves.

I am not sufficiently versed in the history of Chiswick, or of the Royal Botanic Society, to dispute "B. A.'s" statements in a satisfactory manner, but I confess I am a little incredulous, and would be glad to learn how far the ill fortunes of the former were actually due to its exhibitions, and the same with regard to the debt which, we are told, cripples the latter. At all events examples to the contrary are not wanting, and I would ask your correspondent how he accounts for the success of such Societies as the York, Leeds, Glasgow and West of Scotland, and others that could be named, which annually distribute a large amount of prize money, and whose financial

position, I believe, cannot be questioned, and which have been raised and sustained upon one and two-day exhibitions?

I have been an attendant at all the above-named Exhibitions on various occasions, as well as the London Shows, and can speak as to their general "get up," and the energy and ability displayed in their entire management.

I have no wish to raise any unnecessary objections to our great Exhibitions being prolonged to as long a period as may be consistent with the well-being of the subjects exhibited, but I repeat that two days are sufficient for fruit, and from conversations I have often had with exhibitors, I believe I express a very general opinion in saying so.

Prize lists are now generally so arranged that entering for two or three classes in Grapes alone frequently necessitates the cutting of ten or a dozen bunches—a somewhat serious matter, considering that the fruit may have to be kept on hand for many days after its return from the Exhibition, through a variety of circumstances which will readily suggest themselves to the mind of any one accustomed to the fluctuating demands of a gentleman's table.—AN EXHIBITOR.

NUNEHAM PARK.

(Continued from page 295.)

RIPENING in pots laid down upon their sides against the south wall of the yard referred to in my last communication, were strong young Vines, thus kept dry at their roots, whilst the canes were kept in position against the face of the wall, by having the extremities attached to it, each by a single shred and nail. Indeed, the yard was completely filled with a variety of subjects too numerous to note, belonging to a large garden establishment.

I next passed into the frame-ground proper, which is bounded by the yard referred to and by the houses first mentioned, on the south; by the Ivy-covered wall to the westward; on the northern side by the fruit-rooms, Mushroom-house, Potato-stores, &c., all lean-to's, and the stokehole, which heats the Peach-houses over the wall. The fruit-rooms are too dark, close, and circumscribed for such an extensive assortment of fine fruit. As for Potatoes, the "noble tuber," as a valued correspondent of mine, well known to your readers, calls it in a letter I received from him to-day, both Mr. Stewart and myself have never experienced the ill-effects from the disease in our gardens to a greater extent than this year; but my friend will haul in from the fields; not so, poor me, without baiting with the silver hook; but I must not enter on this subject now, some time before long I hope to do so. The Mushroom-house is adjacent to the stokehole, warm and convenient. It contains three long shelves, or tiers of beds, one just over, another coming on, a third to follow, and so forth. In this ground there are various ranges of pits and frames, an extensive pit-vinery, reminding one somewhat of Mr. Rivers's ground vineries, occupied by Black Hamburgh Vines, with Grapes in a ripe state; and a winter Cucumber-house, just finishing-off from Melons. The favourite Melons are—Ne Plus Ultra, a round, obtuse-ended, netted, green-fleshed variety of good size; and Pinkie House, medium-sized, oblong, delicately netted, of a whity-brown appearance, and having a fine aroma. There is, besides, a pit of fine healthy Queen and Hurst House Seedling Pines, promising fine fruit for the winter. The three last-mentioned structures are heated separately by flues, and the remainder of the pits and frames by dung linings, all of which in due time, and with justice to his employer, Mr. Stewart hopes to replace by hot-water pipes to heat also the Peach-houses, at present heated by flues. In front of the above runs a range of pits containing Pines in successional stages of growth, including a batch of the newest varieties for trial, the predominant features being robust health, and that the Queen is the greatest favourite. Again, in front of them, is a long line of frames, at present occupied with Cucumbers, Melons, and myriads of cuttings of Pelargoniums, &c., to be followed, at least as regards the Cucumbers and Melons, by Asparagus for the winter, then by early Potatoes in spring, and so on.

Going now into the second division of the garden through a doorway at the west end of Mr. Stewart's residence, I came to the late Peach-house, which is placed against the south wall of this parallel. A recently-killed rat lay conspicuously for observation, and from some suspicious-looking delvings I saw in the fruit, I should say (excepting for the rat), this was a most satisfactory conclusion, as many remarkably fine Peaches still re-

mained. The trees are trained upon a wire trellis in front in this compartment, which is broader than the other houses. They retained a profuse and healthy foliage, perhaps some people might think too much so, but both wood and leaves were perfectly ripe, as the foliage fell off on being touched. This observation applies to all the compartments. The sorts here are—Chancellor, a fine Clingstone variety; Galande, very fine fruit; Salway, "worthless," to be nuprooted; Walburton Admirable, and Late Admirable. The borders are composed of a free sandy loam, to which are applied bountiful waterings of soap-suds. Two narrow old-fashioned houses followed next. They were planted with young trees at the back three years ago, and the young wood had become very strong—too coarse—and Mr. Stewart intends to have them taken up carefully and replanted at once upon the spot. They are Royal George, Bellegarde, and Grosse Mignonne Peaches, and two Violette Hâtive Nectarines; two of each kind planted alternately, I think. In front were the first forced Kidney Beans, in pots, just coming into blossom. This vegetable is required all the year round without a break. Then followed a narrow early house to be started in December, containing Rivers's Orange Nectarine (which Mr. Stewart considers delicious when eaten as some of our finest Pears should be—in the very first nick of ripeness), Murrey Nectarine, "very good but small;" and of Peaches, Noblesse, Bellegarde, Royal George, and Violette Hâtive, the latter "not worth keeping." Along the front of this house, drying off, were trays of seed-heads of the Nuneham Park Onion.

The second early Peach-houses were the next I entered, two in number, on the Chiswick principle. Mr. Stewart had found the sun too scorching for the trees in these light acute-angled structures, so he had planted and trained thinly on horizontal wires, Sweetwater, Royal Muscadine, and Muscat Hamburgh Vines as a protective screen. I think it will be doubtful if the latter Grape will ripen properly, so I must send Mr. Stewart an Esperione. It would prove an excellent sort to grow with the former two, and would be sure to ripen well and with a fine bloom; twenty-seven bunches have been cut off these white Grape Vines this season; they are two years old. The trees against the wall are the Royal George, Grosse Mignonne, Barrington, Noblesse, Galande, and Violette Hâtive Peaches—the last four Mr. Bailey's old trees on his pet system of training, all the bearing wood on the under sides of the branches; and the trees are certainly upon their last legs. Pyramidal Azaleas in pots were being temporarily housed in front, as it was hardly safe to trust them out longer for fear of frost at night. Every available corner of these houses is filled with bedding plants during the winter months.

On leaving the Peach-houses I remarked 1600 large 32-sized or six-inch pots of Strawberries, in rows on each side of the gravel-walk. The plants were in fine health and vigour, concealing the neat edgings of Box, with which this and all the other walks are bordered. A walk absorbs and radiates the heat for the ripening of the plants better than the plots of cold cinders on which Strawberry plants are so often crowded, and the only objection, Mr. Stewart observed, to the plan is, that it encourages the growth of weeds at the sides of the walk. This I thought merely a secondary consideration, as a Dutch hoe would soon cut them down, the advantages quite outweighing the objection, for the pots are easily accessible for the purposes of cutting off the runners, surface-stirring, and watering, and as for the worms, a piece of turf over the drainage in the pots, and then some soot over that, will effectually prevent their intrusion. This was proved by turning out several balls for inspection; not a worm was there, and a more healthy network of clean fibrous roots could not be desired. The crowns of the plants were also as firm as a sound Azalea bud.

The liquid employed for watering consists of four bucketsful of condung to thirty-six gallons of water well stirred in a tub which runs upon wheels, and exceedingly grateful this application is to the Strawberries. I have found when pot plants are watered with liquid manure made from the droppings of animals, that on the surface of the soil an almost impervious film accumulates, which retains the water long enough around the crowns of the plants to become prejudicial, and to Strawberries especially. That Mr. Stewart did not approve of this was evident by the frequent tipping of a pot to one side to cast off the liquid, and I made known to him and now to the public a simple-enough instrument, which but for the circumstance I should have felt diffident about mentioning. It is a blunt-pointed iron hook similar to those used for picking horses' hoofs, and is 8 inches long, five-eighths of an inch broad, and a quarter of an inch thick. It has a half-circular bend rising

1½ inch, with a two-inch diameter, to form the picker at one end, and having an eyelet-hole wrought in the other for the purpose of hanging it up by.

With this instrument I prevent any lodgement of surface water in my pot culture, and I would advise every man connected with plants to carry one in his pocket, or to have one hanging conveniently within reach. A clumsy workman cannot with it cut off the best surface roots, the bluntness of point guarantees that, and the rim of the pot prevents the instrument working too deep; nor is the collar of the plant likely to be damaged, or the best leaves to be broken off, as the picker glides round upon it obliquely, and is made to slightly surface-stir the soil, while the left hand is made to keep circling the pot towards the operator. A very large number of pots can thus be gone over in a short time, and the surface-stirring being performed once or twice a-week, air is constantly and water immediately admitted. It is a great loss of time to have to linger over pots of plants with the surface of the soil water-bound, whilst the liquid is dribbling through by degrees. Some may say, "Leave room for watering, do not fill the pots so full of soil;" but I answer, when Strawberry plants are fruited in six-inch pots, an extra half, or even a quarter of an inch of surface soil is of great consequence, and so it is for most other plants in pots, for then surface-stirring cannot be neglected entirely, causing a weakly, unhealthy state of existence.

Whilst in the houses the pots are placed in pans upon pieces of charcoal, and bountifully supplied with the liquid manure, the charcoal and pans never remaining without a supply. The sorts forced in succession are—Keens' Seedling, President, Sir Charles Napier, and British Queen. Mr. Stewart is of opinion that ultimately he shall force few other kinds than President, for as regards good flavour and abundant production it bears off the palm with him.

The south wall is occupied to the end with Cherry and Plum trees, among the latter are most of the best varieties. A very extensive bed of young Intermediate Carrots occupied part of the border, for Carrots are counted but of little worth excepting in their young state, and the remainder of the border was devoted to a local dwarf variety of Kidney Bean, excellent both for forcing and garden supply. A curious freak of the Brassica tribe was noticeable as the eye swept over the central ground, the whole of which was trenched and manured with vegetable matter at the same time. Brussels Sprouts took a first position; then followed Backhouse's Winter White Protecting, Cattell's Eclipse, Snow's Winter White, and White Cape Broccolis. The patch of Brussels Sprouts was exceedingly good; of Backhouse's Broccoli scarcely a plant was not diseased and sickly; Cattell's was not quite so bad; next came of Snow's a good healthy crop; and lastly, the White Cape, better than Snow's. Neither Mr. Stewart nor myself could account for such different results. Fine young beds of Asparagus finished-off the quarter, but the plants could never be allowed to reach their highest perfection, as such immense quantities are required for forcing.

On the west border were beds of American Hautbois Strawberry, "a good cropper with flavour equal to the old kind;" the excellent Frogmore Late Pine, and Grove End Scarlet. The north border of this division is chiefly occupied with Sir Harry Strawberry, in my opinion quite a second-rate kind as regards flavour, but one with which it is easy to swamp the house-keeper satisfactorily, for it is an extraordinary bearer, and retains its shape well when preserved. When the plant is treated as an annual the fruit is better flavoured, and may then be allowed to pass muster in a dessert. This north wall is occupied with old Plum trees, soon to be uprooted and replaced with Morello Cherries. At the top part of the quarter were British Queen Peas, just coming into pod, and there is to be found the prime necessity of a garden, a good supply of water in a large, deep, round tank. An underground-pipe conveys to it the water, forced thither by horse-power machinery, which is fixed in the orchard or eastern slip, and through other stop-cock pipes to the mansion and all parts of the grounds. The supply is derived from a pool in the park, but there is also adjacent to the machinery a deep well, from which spring water is pumped up to the house. The front of Mr. Stewart's comfortable domicile again confronts one here, with oblong beds of Carnations, in fine grass and full of health; also Gladioluses, Liliums, &c., which are flanked on one side by beds of bush Roses, propagated by cuttings, a bee-house and Neighbour's hives, and on the other by the Cherry wall, on which are trained some fine Pear as well as Cherry trees. A Pear here struck me as being worthy to single out—a Crasanne-looking fruit. It is

called Alexandre Lambré, and Mr. Stewart said it was a fine Pear for use in March, and not gritty.—UPWARDS AND ONWARDS.

(To be continued.)

GARRYA ELLIPTICA IN FRUIT.

I HAVE been accustomed to see it stated in books and periodicals, even of the highest authority, that this interesting Californian shrub is known in England only as to the male plant. Allow me to state that I last week saw a female plant covered with racemes of ripe fruit. It grows in the shrubbery belonging to the very elegant and delightful residence of Mr. Finzell, Clevedon, twelve miles south-west of Bristol, only a few yards from high-water mark of the Bristol Channel. The racemes are from 2 to 3 inches long, and consist of thirty or forty little capsules the size of Peas, but of the colour and having the downy surface of unripe Peaches. They are packed almost as closely as the drupelets of a Raspberry. The plant has fruited at least once previously, and gives plentiful promise of a renewal of fruit next season. Several male plants stand, as would be expected, in other parts of the grounds. My attention was invited to the Garrya by Mr. Finzell's very intelligent and courteous gardener, Mr. Rennie, who was unable, however, to say from what immediate source the plant had been obtained.

Should any of your readers visit Clevedon, they will do well to ask permission, not only to see the Garrya, but Mr. Rennie's admirable Cucumber-house, certainly the best-managed and best-provided that I have ever entered. Various ornamental plants are also very well managed. Without making pretensions to a grand display, the conservatory is compact and well-appointed, and shows, in more than one instance, what may be done by a man who will think for himself, and resolves to have as good plants as his neighbours. Witness a capital Cycas with as noble a crown of fronds as can be desired, which was literally rescued from a rubbish-heap, and horticulturally rebuilt.—LEO W. GRINDON, 85, Rumford Street, Manchester.

P.S.—Internally, I should add, the Garrya fruits contain purple juice of insipid flavour, and a couple of large seeds.

A NEW PEAR.—RIVERS'S SUMMER BEURRÉ D'AREMBERG.

A GREAT pomological authority has said, "New Pears are like the so-called new Roses and new Strawberries, so numerous as to be almost ridiculous." Under these difficult yet ludicrous circumstances, how can we small people, who wish to introduce a new Pear into our gardens with the view to improve our collection of fruits—how can we arrive at a satisfactory choice? Allow me in some degree to relieve this difficulty of choice by recommending Rivers's Summer Beurré d'Aremberg to a situation in our gardens. I can honestly give it a most excellent character.

In the autumn of 1865 I planted a pyramidal tree of the above at the end of a row of Pear bushes, fifteen in number. This tree, as well as the bushes, flowered in the spring of 1866. A sharp frost in May made almost a clean sweep of the blossoms. The fifteen bushes managed amongst them to rear one fruit; the Summer Beurré d'Aremberg produced three. This fact shows that its blossoms are quite on a par as to hardiness with those of other hardy Pears. In the course of the summer some persons were allowed to see the gardens. Soon after they had left, it was discovered that two of these fruit had disappeared; the third came to an untimely end: so I am unable to state whether this variety will ripen its fruit on a pyramid in the cool west of Yorkshire.

It grows into a well-shaped tree, has a healthy and vigorous growth, an abundance of rich green foliage, makes fruit-spurs freely, and ripens its wood well; also it did not sustain the slightest injury from the last most severe winter. In November last I planted against a south stone wall in a diagonal direction, according to the newest fashion, a single cordon of the Summer Beurré d'Aremberg, which produced three fine fruit, weighing about 4 ozs. each, and ripening on the 22nd of September. It is most probable that when this tree is fully established, not only will its fruit be larger, but that they will also ripen some days earlier. These three fruit showed not the slightest tendency to crack; the skin was smooth and clear, and as thin as silver paper; flesh very fine throughout, scarcely any core, not a trace of grit, melting, sugary, juicy, with a distinct and delicious flavour. This excellent variety is all the

more valuable, as its fruit is ripe just at the time when good Pears are scarce.

Here Doyenné d'Eté, a bush, opens the Pear season on the 1st of August; then follow in due succession the Jargonelle and Beurré Giffard. It is a mistake to plant these varieties against a wall: both of them, the Jargonelle especially, when double worked on the Quince stock bear abundantly as bushes in the open quarters of the garden. Then comes an interval of four, five, or six weeks according to the season, until Williams's Bon Chrétien is ready. The flavour of this variety is so musky that many persons do not like it, in which case the interval is prolonged until Beurré d'Amanlis is ripe. It is no small recommendation to the Summer Beurré d'Aremberg that it fills up about three weeks of this interval; and that it does not enter into competition with any first-rate variety, but occupies a time of year when a really fine Pear is much needed.—C. J. M., Gargrave, Leeds.

PROLIFEROUS FERNS.

IN giving any new instances of prolificulous Ferns, it would be desirable that the circumstances under which the plants have been grown should be stated, as well as the number of seasons they have displayed that property, the proportion of fronds on the plant that have been affected, what is the average number of bulbils produced on the fronds, and with what degree of constancy such production is maintained. The confined moist atmosphere of close glass structures has, no doubt, considerable influence on Ferns in occasioning prolificulous growth, and some of the varieties of *Scolopendrium vulgare*, which are profusely prolificulous under glass, are scarcely at all so in the open air.

Another circumstance, which may sometimes give rise to this curious quality, is the sudden check in the growth of healthy plants, whether caused by their transplantation to a less congenial soil, or from being deprived, by accident or otherwise, of the majority of their fronds while in an immature state. I have noticed one or two instances of bulbiferous growth in plants of *Polystichum angulare*, which I should be inclined to ascribe to this cause.

I have two plants of *Polystichum angulare* which seem to belong to the sub-tripinnatum rather than the bi-serratum group, one from near Drogheda, the other from the county of Wicklow, both of which have been grown for the last two years in an open-air fernery near the sea. At the time of finding them I did not notice any bulbils on either of them, but at present three-fourths of the fronds on each plant bear a pair of bulbils in the axils of the two lowermost pinne, in various stages of development; some of these tiny plants having a couple of fronds about an inch long, with distinct pinne and pinnales. I do not think, however, that such plants can lay claim to be ranked as distinct varieties, they only show that the varieties sub-tripinnatum and biserratum of *Polystichum angulare*, sometimes become prolificulous even under no apparently exciting conditions.

Under glass cultivation the following Ferns have been more or less prolificulous with me:—*Polystichum angulare lineare*, *Polystichum angulare cristatum*, *Polystichum angulare interruptum*, and *Polystichum angulare oxyphyllum*; the first two very slightly, the next one rather more so, and the last very freely.—W. O'B.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Asparagus, the beds should be cleared and dressed for the winter. *Broccoli*, this is an excellent period to lay the spring sorts. It is best performed by two persons, one on each side of the drill or row. Keep a good trench, and sink all the heads to the north, burying the stems with soil up to, and even amongst some of the lower leaves. This proceeding will protect them very considerably against a severe winter, first by reason of their position, second by thus avoiding sudden changes or excitement, and lastly through the reduction of succulence. It is no uncommon or new practice for good kitchen gardeners to throw their overgrown Lettuce or Cauliflower plants on the ground to shrivel before planting them. Plants in this state will endure hard weather better than those in luxuriant growth. *Cardoons*, tie up with hay or straw bands; or, after fastening the stalks together with matting, thatch with clean drawn straw almost to the extremities of the leaves, and then earth them up. *Cauliflowers* nearly fit for use may be taken up and placed

out of the reach of frost. *Rhubarb*, clear off the leaves now decayed, as also those of *Sea-kale*; fork over the soil, and cover the *Sea-kale* with leaves where it is intended to be forced early. *Mushrooms*, the beds made as directed in September, will now be bearing. It is a good plan to sprinkle or syringe the surface of the bed a week or so before the *Mushrooms* make their appearance, more especially in *Mushroom-houses*, where a fire may have been used occasionally; this is far better than watering after the *Mushrooms* are through. The water, however, must be allowed to penetrate so as to soften the soil. Late beds, or portions of such may still be made in-doors; let the droppings be made somewhat drier than those of September, and do not mix any soil with them. In spawning the beds, it is a good practice to wrap the lump of spawn in a mass of half-decayed, half-moistened, strawy manure, for in case of overheating, the spawn is not so readily destroyed. Let all be made as firm as possible by treading or ramming; light and porous beds will neither endure so long, nor produce such good *Mushrooms* as those of a solid character.

FRUIT GARDEN.

The soil is now in good working condition, and its dry state is very favourable for the formation and renovation of borders for fruit trees. Such operations can be much better effected when the roads and materials are dry than otherwise. Make fresh plantations of *Gooseberries*, *Currants*, and *Raspberries*, where required, and propagate the former by cuttings. The planting of *Cherries* and *Plums* may be immediately commenced, their leaves having fallen early in consequence of the frequent occurrence of frosty nights. As soon as *Fig* trees are clear of foliage, they may be finally covered for the winter. As many branches as can be huddled together should be neatly covered with straw, and secured to the wall. The fruit-room will yet require a free circulation of air.

FLOWER GARDEN.

During fine weather all out-door work should be forwarded as much as possible. Bulbs of every description intended for beds and borders should be planted before the soil becomes saturated with moisture. Where new work is to be done, it should also be carried on with as much expedition as possible while the weather is fine. Turf out of order should be fresh laid, taking care to level the surface when necessary. Planting should likewise be proceeded with before cold and frosty weather sets in. Look carefully after all kinds of seeds, collect them as they ripen, and keep them in a dry, airy place until there is more leisure time for cleaning them. Clip and weed Box edgings, and sweep gravel walks occasionally to prevent leaves from staining the gravel. As the winter approaches, protection of some kind should be provided for plants and shrubs of a tender character; almost any material is eligible, provided it will, in a considerable degree, throw off wet. Canopies for this purpose should be so contrived as to admit of one or two sides being opened at pleasure. If only one, we would place it on the north or west side, certainly not on the south, as the excitement occasioned by bursts of sunshine is apt to prove very prejudicial. The covering or canopy should by no means be allowed to touch the plant, and the greater the space allowed between it and the plant the better will it afford protection. It is a bad plan to bundle the shoots together like a besom in order to make them occupy a more limited space. Such may save trouble and material, but is a most injurious proceeding. More injury is occasioned by confined damp, in a majority of cases, than by a lowering of temperature. Hoodings of straw, so formed as to overlap the protecting material beneath, are very good and simple protectors, and if rightly contrived may be removed with as much facility for ventilation as the top of any ordinary hand-glass. Oil cloth will prove a good protection also, if formed into a kind of cone, on the sides of which a small flap or two may be made to open without admitting the rain. Before the application of any top covering we would advise an inch or two of the surface soil around the collar to be removed, and replaced with dry sawdust, the newer the better. This should be piled as high as the stem of the plant will admit, taking care not to choke too many of the lower leaves, and if the canopy is so contrived as to overlap this mound, the covering will be complete. The only thing that remains is to give air at favourable opportunities, avoiding particularly cutting winds, which generally do more harm than the frosts. Mr. Constantine, gardener at Hillingdon, uses such canopies for the protection for his half-hardy shrubs and Conifere. Defer the operation of covering as long as is consistent with the security of the plants.

GREENHOUSE AND CONSERVATORY.

On all favourable occasions admit air freely, it will not produce those withering effects upon the foliage that such an exposure would do in the spring. The plants having been recently fully exposed, to shut them up closely now would induce growth, and prove their ruin. In order that the *Pelargoniums* may be kept in a comparatively dormant state for some time, little water and plenty of air must be given; should they advance into a free-growing state now the damps and fogs of the next six weeks may produce spots on the leaves, and to cure this you will have at an unnatural season to apply fire heat. The strength of the plants will thereby be greatly exhausted, and, consequently, they will neither flower so finely nor so profusely. The Hybrid *Perpetual*, *Tea*, and other *Roses*, as well as the *Chrysanthemums*, if attended to as directed in former calendars, will render the greenhouse as well as the conservatory most interesting for the next two months. If severe weather should occur do not hesitate to use a little fire heat, especially where plants are blooming, as by this means a free ventilation may be indulged in to expel damp and stagnant air.

STOVE.

As before, much less moisture will suffice at this period, even for the growing *Orchids*. Keep the temperature progressively on the decline, more especially in dark weather. Place all flowering plants in conspicuous situations. *Epiphyllum truncatum* makes a fine appearance in winter, some plants of it may be forwarded by additional heat, and others retarded by being kept in a low temperature, so as to prolong their flowering season. It is astonishing how much gaiety can be produced by a little forethought in this way. The temperature may now decline at night to 65°.

PITS AND FRAMES.

If the weather continues dry, more watering will be required, and air must be given freely to such plants as are well established in their pots. Cuttings not yet rooted should be shaded and kept quite close during the middle of the day, but uncovered early enough in the afternoon to allow a little sun heat to collect for the night. Choice plants in the *parterre* can no longer be depended upon as to display. It is, therefore, desirable at this period to look over the masses and beds, and see if there is any choice subject of a tender character which it is desirable to secure for next year; such may be potted with a ball, and wintered in the cold pit.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Celery.—Took the opportunity of a dry day to put a little well pulverised earth to *Celery*-beds. There is no difficulty in doing this, even if a bed is from three to five rows in width, if the *Celery* plants are neatly tied up. We rarely use boards across for this purpose, unless when we place ashes round the *Celery*, and earth in the spaces between. Sifted cinder ashes immediately round the plants are a good safeguard against worms and slugs. We generally, when we have it, strew a little lime among the plants a short time before earthing-up, which helps to drive all such enemies away, as a few slugs and snails will spoil the look of the finest heads of *Celery*. Could we manage it, we would always use long dry litter, or long grass, put on in thin layers, as the last topping-up for *Celery* either in rows or beds. Even in beds, if such materials are put neatly on, and raised highest in the middle, they soon get on the surface a crust that will throw heavy rains to the sides, and thus there is no danger of damping in the centre of the plants, and no danger of injury from frost.

Cabbages, *Cauliflowers*, &c., as in previous week's notices.

Lettuces.—Have a lot in by the heels, which we have not had time to plant in orchard-houses, at the bases of walls, &c., to stand the winter, and will in a day or two take up a lot rather more than half-grown, with balls, to place under old sashes in a turf-pit, with other protection, and will do the same with a piece of *Endive*. Last year, and several previous years, our Broad-leaved *Endive* stood remarkably well, with dry litter placed over it out of doors in frosty nights, and taken off when the frost was gone. A little of the litter was strewed on the ground between the plants, which kept them warm at the roots. Plants thus managed kept well last season up to April. The great danger in turf-pits, unless there is good glass covering, proceeds from two causes—the damp which accumulates from the mere sinking of the pit, and which could only be avoided by so raising the walls of earth or turf that the bottom or available

space inside should be above and not below the surrounding ground; and, secondly, the rats, grass mice, and, if outside the walls, even rabbits finding their way inside of such a place, and doing much mischief, especially when the pit is covered over several days and nights during severe frosts. We have never kept Lettuces, Endive, and even Cauliflowers better than in such pits, regularly covered with neatly-made straw covers, held up with stakes during the day, the cover resting on its north end, and being let down every night, affording additional covering in frost; but then we had pet cats that knew their business too well ever to allow a mouse, rat, or rabbit, to be seen twice near such pits. When these vermin cannot be excluded, we have proved in many seasons that they are less likely to meddle with Endive, and other crops grown on the open or ridged border, than they are when such things are placed, as we think, more securely in a pit. The very snugness we give them renders them more a tempting curiosity to be found out and tested.

Carrots.—Will finish taking up the first opportunity, for if left longer in the ground they are apt to make a second growth, and are more likely to be attacked by worms. They should be dried before being stacked in dry sand or ashes. Nothing is worse for packing in than old tan or sawdust, whatever the kind of wood, and however dry it may be. It will be almost sure to taint the roots, and what is worse, will be very likely, from heating, to reduce them to a mass of rottenness. Some correspondents tell us how well the sawdust answers, and hence we give this caution. It is very cleanly to work amongst, and we used it frequently for a surfacing to hotbeds, for setting or plunging pots with plants in, but we seldom use it now if we can avoid doing so, and for two reasons—first, because we generally found numbers of nasty funguses that would cover the pots if left a day or two; and, secondly, because the sawdust was apt to cling to and so stop up the drainage-hole, as to make the pots water-logged. Once we saw a couple of tens of Carrots, and fine ones they were, a mass of rottenness from being packed in dry sawdust. When the holes in the bottoms of the pots are secured, by setting large pots on two bricks, so as to leave a space below the drainage-hole open, then sawdust is a valuable assistant for giving a mild bottom heat to the roots, and if obtained fresh it will maintain this heat for a long time.

Cucumbers.—Placed some plants in a pit to keep them on through the winter if deemed desirable, and to ease them, put a good lining round four lights in frames so as to keep them in bearing in the meantime. The lining is formed of long litter and rather long grass from the part of the lawn least seen. Every barrowload of dung, every bit of grass, and all fallen leaves have now to be made the most of to yield a little heat before they are decomposed.

FRUIT DEPARTMENT.

Before this is printed, our last Peaches will be gone, and we shall have nothing left in the way of stone fruit except Coe's Golden Drop Plums. These from an orchard-house are generally remarkable for richness of flavour. We have not yet been able to top-dress afresh any of our fruit trees in pots, but we shall move them directly to crack any roots that have gone beyond the pots. Of the two periods for top dressing, autumn and spring, we like the autumn best if we can find time, but most of us can hardly ever overtake our work so as to do just as we like, and it requires not only hands but heads to do what is most needful at the time, and do everything so as to have no second doing, nothing in the way of undoing, and to do work without in the doing making more work out of it; simple though it seems, this is no easy matter to accomplish at all times in a garden, one job so naturally leading to another.

For preparing for planting and transplanting, see last week's notices. Last week we congratulated ourselves that the rats, though thieving our Pears, had not touched our Melons, but they have made their way into a frame, holed the best and ripest of the fruit, and a little arsenic being sprinkled on the gnawed parts, we believe they have paid dearly for their thieving, though that will not bring the Melons back for use.

ORNAMENTAL DEPARTMENT.

We are forwarding work as much as possible in order to permit of some moving and transplanting of shrubs, and this is just one of those kinds of work which often make other work. For instance, when shrubs are moderately thick, the lawn need not be so exact as to level and fineness, but when so many are moved as to leave a large open space, the mere turfing over the holes will often be a worse than useless task, involving much future labour, and making it necessary

to mow always with the scythe instead of the machine, which always does best when the grass is of a uniform level slope. In all such cases it is by far the best plan to well beat all such holes, take off the whole turf, level the ground properly, and lay the turf down again. One advantage of doing such work now is, that after a beating and rolling the turf will look after itself, which it often will not do if turfing is deferred to the spring. Much of the dispatch and the perfection of the work depends on taking the turf up, so that it shall be uniform in size, and especially in thickness, as that will dispense with much of the troublesome operation of packing in laying the turf.

We have been watching all the week until Saturday for the grass being dry enough to machine it near the mansion, and only succeeded on Saturday afternoon. With the exception of a few tree leaves, especially Chestnut and Elm, the flower garden is still beautiful, though a few of the Scarlet Pelargonium-beds have been sadly drenched with the rains; nevertheless, a few hours' sun wrought wonders.

Much time has been taken up in putting in *Calceolaria* cuttings in the pit as described last week, and also in moving many plants from cold pits, and pits where we could give only a little protection, to places where they would be more safe. For instance, we had the trees in the Peach-house pruned, the glass, woodwork, walls, trellis, and trees washed with hot water, then with soap water, and the trees run over with the same with brushes, and afterwards slightly painted with a weak solution of Gishurst compound and a little lime in it, as the white colour helps to keep the buds backward. The wooden trellis and the walls were painted with limewash, toned down to a darker colour by mixing with it blue black powder, generally at the rate of from 2 to 3 ozs. to a pail. This does away with the scorching reflection of light and heat from a bright white surface. The lime was fresh before it was reduced to a sort of lime putty to make it soft for the brush. We have never seen a better example of white lime-washing, for the day after the wall was washed we could not whiten our fingers in the least by drawing them firmly along the wall. So far as anything coming off was concerned, it was as firm as paint—a result of importance, and only to be attained by having fresh lime and a clean-washed wall to put it on. We covered the floor of this house with boxes of bedding *Pelargoniums*, mostly of the variegated kinds, and the shelves used for Strawberries were filled chiefly with *Verbenas*, thickly set and struck in 48-sized pots. Then, as Melon and Cucumber frames gave us more room, we moved numbers of the more exposed plants into these temporarily until better established, and we had another house made ready to place them in for the worst months of the winter. A few subjects were just sending their roots out, and others not much more than swelling at their base, and the most tender of these we moved to a pit, where, by means of grass and litter beneath, we could give them a little bottom heat, and by means of a pipe in front a little dry heat in cold, wet weather; in a few weeks they will be established. Others we gave a little bottom heat to in frames, taking out the soil and about 9 inches of the surface dung, mixing the other up with grass, litter, and leaves, being careful to elevate the bed more at the back, and then we replaced the rotten dung on the surface, put on the frame, placed a barrowload of dry ashes in each light, and plunged the pots of cuttings. With this help they will be secure in a few weeks. All such pots, if at all dry, were watered when out, so as to take as little damp into the new place as possible. For a continuance, the damp that will come from the rough fermenting material beneath would be injurious; but the heat it gives will be invaluable in the present case, and the dry ashes on the surface are also a good security.

Young plants in boxes, pots, pans, &c., now well rooted, and that cannot be taken into houses where there is fire heat, should have nothing in the way of bottom heat. They will be much better in a bed where the bottom is above the surrounding ground level, than in an old hotbed of any kind, and provided the leaves do not actually flag, all such cuttings should be kept as dry as they safely can be, and be rendered hardy by as much exposure as possible, but keeping them from the slightest rains, and even from mists.

To succeed with *Verbenas*, *Pelargoniums*, &c., in a cold pit, or cold frame, it is essential that the plants be rooted by the middle of October, and that from that time as much dryness as the plants will stand must be a main consideration. Growth during the winter months in such circumstances should be avoided, and the chief object should be to keep them as they

are, dry and safe; they will come on fast enough in spring. As several times stated, we except Calceolarias, they will suffer little from damp, unless it is excessive.

In keeping plants in such cool places, much will depend on the dryness of the covering in severe weather. Like many more we cannot practise what we recommend, but we know what would be the easiest and cheapest way for protecting all such plants in cold pits and frames. First, have a light waterproof covering that will go over all the glass, and if the wall plates, all the better. To sleep soundly we would use this every night after the end of October, as it is very seldom there will be dangerous frosts before that time. In mild weather we would uncover, and give air early, and if a plant suffered from dryness, we would lift it out and water it. This covering will make all safe, if a sudden frost of a few degrees should come. When a frost is likely to set in, we would cover the glass with calico or other cloth, so as to keep the glass clean; on that we would place, according to the frost, from 3 to 6 or more inches of dry litter—rough hay is better than straw—and then place over that the waterproof covering. Provided the walls were frost-proof, we question if any frost we are likely to have would penetrate 6 inches of dry hay, with a clean cloth below, and a waterproof cloth above. The advantage of this plan is, that as soon as the frost is gone, you can take your litter into a dry place, and keep it ready for use; and then, having served all the winter, it will come in useful as a part of your hotbed manure. We have seldom been able to carry all these precautions out, but the mode is not only the best, but the cheapest in the end.

We have often saved well great numbers of plants with nothing but litter for protection, but do it as we would, the labour was vastly increased. Now to "DISCIPULUS," who hates furnace work, but would not mind a little labour, we advise the above mode. We will not enter into the plans for taking off and putting on such covers. One of the simplest is to have a cover the size of so many lights, from two to half a dozen or more, with a neat pole—say 2 inches in diameter, fastened to each end. These poles will enable you to roll up the covers easily, and lay them down as easily, and the covers, secured with a string to a staple in the centre of each light, back and front, will be secure in wind, and rain, and storm. As stated above, we would prefer using this waterproof covering every night, and the other and the litter only when the weather demanded it. The under cloth is only wanted for keeping the glass clean. It may be dispensed with, if the labour is taken to brush the remains of the dry litter from the glass, but such cloth and such waterproofed covering will last many years if not used for other purposes.

Though pressed for time we must give advice to two correspondents, as another week may be too late. First to "ANXIOUS," who has neglected taking cuttings of his Scarlet Pelargoniums, but who is told he may succeed now by placing them in a dung hotbed, or in a greenhouse where the temperature will range from 40° to 45° in winter, and asks how he must proceed. Well, were we sure of a month of fine weather, we would say, Take off your cuttings as large as you can, remove almost all the leaves except small ones, and place the cuttings in the hotbed. As, however, the weather is uncertain, and the hotbed will be sure to weaken the cuttings and render them more liable to injury from changes, we would in your case make the cuttings as above, leaving little except the small leaves at the point, insert firmly and thickly in sandy loam, and place them at once in the openest part of your greenhouse; then, if watered just as they require it, and withered leaves be taken off as they appear, the most of these will stand and root well before the spring. All the succulent Scarlets will do best when thus treated; and in your case we would give no excitement by a hotbed, as the losses will ultimately be greater. If you could command dry heat as well, the bottom heat would have been an advantage, not otherwise new. The case is different from that to which we have alluded, in which the cuttings had been inserted some time, and are yet not rooting so freely as desirable.

The other correspondent has five beds of Scarlet Pelargoniums, but has taken off no cuttings, has only the window of a sitting-room, and a spare lumber-room with a window and no fireplace. In your case you may take as many cuttings as the window will hold, and place them thickly in pots, moving them from the window in cold nights. Then, as soon as the plants in the beds fade, or as seen as you can, cut them down to within 6 or 8 inches of the ground, remove every leaf, lift the plants, and pack the roots firmly and thickly in soil in boxes or large pots, water them, and when well drained move them to your spare room; all they will then want will be to be

protected from frost in winter, and to be potted separately and to have more light as they begin to grow in March or April.—R. F.

COVENT GARDEN MARKET.—OCTOBER 23.

BUSINESS is still unimportant, and very little change has taken place, the demand being steady for all good descriptions of produce both English and Foreign. The Potato trade has, however, been much stimulated by additional reports of disease and light crops, the advance being from 8 to 10 shillings per ton.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples ½ sieve	1	0 to 1	Melons..... each	3	0 to 5
Apricots doz	0	0 0 0	Nectarines doz.	0	0 0 0
Cherries lb.	0	0 0 0	Oranges..... 100	8	0 14 0
Chestnuts bush.	8	0 14 0	Peaches..... doz.	8	0 15 0
Currants..... ½ sieve	0	0 0 0	Pears (dessert) .. doz.	2	0 3 0
Black doz.	0	0 0 0	Pine Apples lb.	4	0 0 0
Figs doz.	6	0 0 0	Plums ½ sieve	4	0 6 0
Filberts..... lb.	1	0 0 0	Quinces doz.	0	0 0 0
Cobs..... lb.	1	6 0 0	Raspberries..... lb.	0	0 0 0
Gooseberries .. quart	0	0 0 0	Strawberries..... lb.	0	0 0 0
Grapes, Hothouse.. lb.	1	6 4 0	Walnuts..... bush.	10	0 14 0
Lemons..... 100	8	0 12 0	do. per 100	1	0 1 6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes..... doz.	2	0	4	0	Leeks..... bunch	0	3	0	0
Asparagus..... bundle	0	0	0	0	Lettuce..... per score	1	0	1	6
Beans, Kidney, ½ sieve	6	0	3	6	Mushrooms..... pottle	2	0	3	0
Scarlet Run. ½ sieve	2	6	0	3	Mustd. & Cress, punnet	6	2	0	0
Beet, Red..... doz.	2	0	3	0	Onions..... per bushel	3	0	5	0
Broccoli..... bundle	0	6	1	6	Parsley..... per sieve	3	0	0	9
Brns. Sprouts ½ sieve	2	0	2	6	Parsnips..... doz.	0	9	1	6
Cabbage..... doz.	1	0	1	6	Peas..... per quart	0	6	0	0
Capscums..... 100	2	0	3	0	Potatoes..... bushel	3	0	4	6
Carrots..... bunch	0	6	0	8	Kidney..... do.	3	6	4	6
Cauliflower..... doz.	3	0	6	6	Radishes doz. bunches	0	9	1	0
Celery..... bundle	1	0	1	6	Rhubarb..... bundle	0	0	0	0
Cucumbers..... each	0	6	1	0	Savoy..... doz.	0	0	6	0
Pickling..... doz.	2	6	0	0	Sea-kale..... basket	0	0	0	9
Endive..... doz.	1	0	0	0	Shallots..... lb.	0	8	0	0
Fennel..... bunch	3	6	0	0	Spinach..... bushel	2	0	3	0
Garlic..... lb.	0	8	0	0	Tomatoes.... per doz.	2	0	3	0
Herbs..... bunch	0	3	0	0	Turnips..... bunch	0	4	0	0
Horseradish .. bundle	2	6	4	0	Vegetable Marrows, dz.	1	0	2	0

TO CORRESPONDENTS.

.. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

BOOKS (H. M. G.).—The "Jardin Fruiter du Museum" is a periodical publication appearing at no fixed dates. It is quite a work of art, and the figures are faithfully drawn and coloured. There are already eighty-eight numbers published at 5 francs (equal to 5s. here). We do not know that Mr. Leroy's book is published; we think not. (*A Constant Reader*).—"The Pine Apple Manual" will suit you. You can have it free by post from our office if you enclose 2s. 8d. in postage stamps. (*Alfred P.*).—The book you mention can be had of Messrs. Lovell, Reeve & Co. (*Alpha, Ipswich*).—"The Garden Manual" may suit you. You can have it free by post from our office if you enclose twenty postage stamps with your address.

GROUND VINERIES (Time).—If the article appeared recently we think it must have been in No. 310 or 312, New Series; but the principle of these structures was explained in No. 635, Old Series, and Nos. 28 and 29, New Series, besides which there are many other articles on the subject, which may have appeared in your missing copies.

GRAPES (*Monticola*).—Chasselas Napoleon is not a Muscat, but rather of the Muscadine flavour, and it ripens in the same house as Black Hamburgh and Royal Muscadine. Olivette Noire is a long ovoid Grapo of the shape and appearance of the Morocco, but far inferior in flavour to that variety. It requires, as you appear to know, a high temperature to ripen it, and does very well in Languedoc and Provence, where it ripens in the open air; but it is not of sufficient merit to occupy space in a vinery in this country.

STRAWBERRIES AND RASPBERRIES (G. S.).—We have had no experience of either Wilson's Albany Strawberry or of the Philadelphia Raspberry. From what we know of other American Strawberries and Raspberries cultivated in this country we should not anticipate any great excellence.

PERRY AND CIDER.—"H. W." wishes for the name of some manufacturer of these.

HOLLIES (H. T.).—Apply to any of the nurserymen who advertise in our Journal, telling them what you need.

EXCHANGE OF CUTTINGS (A Constant Subscriber).—The trouble and time are more than we can spare for such transactions.

PRESERVING TWINE (W. H. G.).—We know of no better mode than soaking it in a strong decoction of Oak bark; but we do not know the recipe you mention.

TRICOLOR PELARGONIUM (Alpha Tau).—Your Pelargonium is of first-rate quality. There are some very like it, but the deep yellow margin is distinct. Your best way of testing its merits is to exhibit it at the next special Tricolor exhibition, which will be held in May next. When there are so many closely resembling each other, the only way to arrive at their respective merits is by comparison.

SALT FOR MUSHROOM-BEDS (W. A. O.).—We have used it in the proportion of an ounce to four gallons, making holes, and preventing the water running on the surface of the bed, and sometimes it did good in bringing on another gathering. We used it chiefly when there were in the bed small worms that found their way to the surface and made it rough and uneven. More salt we have used, but with no good result. At all times the salt water should be kept off any Mushroom, however small. Instead of using salt at all we would recommend a peck of sheep-droppings, soaked in ten gallons of water; the water to be poured on and stirred when hot, and allowed to stand until clear and milk warm. This will often do good to an old bed; but if the spawn is run out no such doctoring will be of any avail.

CUTTING DOWN BEDDING PELARGONIUMS LATE (Item).—You may escape all bleeding and rotting of the stems by merely allowing your plants to become rather dry before you prune them, and then with a brush or your fingers you may, for additional security, though you will hardly find it necessary, dab the cut parts with a powder of equal parts lime and charcoal dust, or with Thomson's styptic.

STOVE-HEATING A GREENHOUSE (An Old Subscriber).—By having an iron stove beneath your house, taking a pipe or flue from it through the floor, and allowing the heat and smoke from the coke, &c., to diffuse itself in your house, as you propose, you would soon not have a plant alive. Drying malt with coke, and heating a house filled with living plants from what is nothing else than an open coke fire, without a flue to take off the products of combustion, are very different. With a waste of heat you may have your stove as proposed, but the pipe must not only lead into the house, it must go round part, and lead out of it into the open air. Your simplest plan is to place your stove on the floor of the house, and take a pipe from it through the roof, and the best way to do that is to take out a square of glass and substitute a square of zinc or plate iron, with a hole cut in it to suit the pipe. The less you have of a horizontal pipe the better will the stove act. Mr. Fish described sometime ago the working of a stove that excluded frost from an open lean-to more than five times the size of yours. A small iron stove would do for your house if placed inside of it; but the following are great helps to complete success:—The fire-box should stand free, say from 14 to 2 inches from the sides of the stove, and then the sides never become so hot as to burn the air near them, which is so prejudicial to plants and men too. Dry materials should be used in lighting the fire. A little water should be put on the ashes when cleaning it out, and the draught should be regulated by air in the ashpit door. When once heated, a slit, 1 inch long and one-eighth of an inch wide, will keep up a slow regular combustion.

DISH OF APPLES (T. Lennor).—By "a dish of Apples" is intended such a dish as would be placed upon table for dessert. Six Apples make a handsome pyramidal dish—five as the base, and one above in the middle. Write to Mr. Richards, Assistant Secretary, Royal Horticultural Society, South Kensington, for the schedule.

PLANTING BULBS IN BEDS (One-year Subscriber).—We do not think we can do better than direct your attention to the answer respecting planting bulbs at page 301. You will there see how the one will succeed the other; and you may plant your beds and borders with the Narcissus, Hyacinths, and other bulbs, to succeed Crocuses, the Narcissus, &c., in the centre, as they relieve blue, white, and red Hyacinths; or you may make each bed of a particular bulb. It is easy to make pleasing combinations with Crocuses and other bulbs. For instance, take a circle, lay out a lover's knot, fill the scroll lines with double rows of purple, the spaces enclosed with white, the outside spaces with yellow, and one or two lines round the outside with blue; but you will do it better than we can tell you.

COOKING A NEW VEGETABLE (F. H.).—How can we possibly tell how to cook it, as you do not say what it is?

HAYS'S PATENT STOVE.—A *Deronsire Rector* would be glad to know "whether 'Hays's Patent Stove,' so much spoken of last year, has answered the expectations of those who have tried it? Will it keep frost out of an ordinary-sized greenhouse or orchard-house? Is the patent fuel, which alone it will burn, always procurable and always good? The stove is not advertised this season. Why?"

FLUELESS STOVES (T. H.).—Unless with flues, neither of the inventions you name ought to be admitted among plants.

PLANTING VINES INSIDE (Fred).—We would decidedly plant the Vines inside, in your two-foot wide border. You say that is well drained; if so, have 9 inches of rubble at the bottom, and 2 feet of filly soil above it. It matters not how high above the floor of your house this border is, provided, whatever the height, that height shall be higher by 2 or 3 inches than the top of the border outside the house. If that outside border slopes to the front all the better. The pots on the trellis over the border will do it no harm; but when these plants want much water, it would be as well to set the pots in saucers as otherwise the surface of the border might get wet and the bottom dry, and the soil become sour and cankered.

CHERRY TREE LIFTING (Amateur).—The best and only plan you can adopt is to much round the stem and for a yard from it with 3 inches of littery manure, and await the result of the severe root-pruning your tree has undergone. Probably all will be well. We do not expect any part of the branches will die, at least not unless some are damaged.

CUTTING DOWN A HOLLY HEDGE (R. B.).—The Holly hedge planted last spring should not be headed or cut down to the ground now; but towards the close of March or early in April next year. In cutting, leave as much young wood as you can; at any rate, do not cut the plants in to bare stumps.

HEATING A VINERY (J. M., Dartmoor).—We see that you have a lean-to range of glass, consisting of three divisions; the two end ones, 26 feet by 15, and the central one 12 feet by 15, and in the central one there is a tank at the back, from which by means of plugs a flow-pipe is taken and a return brought back from each of the houses, but that enough of heat cannot be obtained. This you attribute to the size of the pipes, position and size of the tanks at the ends, &c., of which hereafter. What puzzles us is the question, "If a boiler cannot be substituted for the tank, and the large tanks at each end removed?" Now, we should suppose this tank in the middle house to be heated already by a boiler. If not, with what? If so, why want a boiler instead of the tank? That tank is not too large if connected directly with a boiler, as it allows room for expansion, and, in general, you need never have it above half full of water, if the flow-pipes proceed, as they generally do, from the bottom. Are we correct in supposing that the flow-pipes only are connected with this tank, and the return terminates at the bottom of the boiler? If not, the circulation will be languid. We presume that the tank at the end of each house is on the same level as this supply tank in the middle house, otherwise the water would run over at each end. The tanks at the farther end of each house, intended chiefly, we presume, to give access to air and to connect the flow and return pipes, do seem large, 48 inches long, 16 wide, and 23 deep, and with the size of the flow-pipe, 12 inches wide and 5 deep, present a large body of water to be heated. For early forcing, we think you have scarcely enough of piping, and more especially if your return round pipe of 5 inches in diameter is much lower than the flow-pipe. To obtain early what heat you want, do away with the tank, or merely leave it for water, and from the end of your flat pipe, after inserting an air-pipe, bring back two four-inch returns, or your present return-pipe and another, but on the same level as the flow-pipe until you come to the rear end, and then join these in one and take it to the boiler. Meanwhile, you may prove to yourself how much may be done by at once lessening the quantity of water to be heated. You may stick a stone, a block of heavy wood, &c., into the tank at the farther end, so as to leave room for 2 inches or so of water round it. Then lessen the water in your five-inch-deep flow-pipe, 12 inches wide. Be satisfied with from 2 to 2½ or 3 inches at the most; 2½ inches will be ample, and with that amount in the bottom of the flat pipe, you will have heat sooner and more of it than you can ever obtain from your deep pipes. The heat will rise, you cannot keep it down.

GREENHOUSE VINERY (E. Brownson).—We have no doubt that you will succeed with your greenhouse vinery, according to the plan proposed, and more especially as you will be likely to make your own idea the most successful. The success, however, will, to a great extent, depend on not expecting too much and not growing too many things in the house. For instance, you will not do much with greenhouse plants if you attempt early Grapes, as may be your aim, when you speak not only of the plenty of ventilation, and hot and cold air at will, but also having plenty of heat at command. The house is a hipped lean-to, the front rafters 12 feet long, and the hip 5 feet; the width of the house about 15 feet, and the length 16 feet. In front there is 2½ feet glass, and beneath that a wall. Inside of that wall and separated from the floor of the house, is a border 2½ feet wide, and 2½ feet deep, with rubble for drainage beneath that, and the rubble, again, separated from an air-chamber beneath that narrow border. It is proposed to plant Vines in this well-prepared but narrow border, and as they decline in strength to take them out and put in fresh ones, and also to have Vines in pots against the back wall, and the question put is, How many Vines shall be planted in this border? Now, to obtain much from this border as soon as possible, we would plant from eight to ten Vines, and from the heat almost any Vine would flourish, and with rich top dressings they will bear for several years. With this thick planting, however, the roof will be so covered that after the first year or two you will do no good with Vines against the back wall, in pots or otherwise. For the first two years or so, you could have box-shelves fixed 3 feet or so from the top of your back wall, and in these boxes pack your Vines in pots, and train them up and under the hip roof and downwards; but even these will not do much after the front roof is covered, but you might allow each set of Vines only a portion of the roof, and then both sets would do well. We merely wish you to bear in mind, that when once the roof is covered, no light to be of much use will reach the back wall. Plants well ripened, as to their wood, will fruit there, but the wood will not be matured for another season. If you wished to give even partial justice to your back wall, and at the same time grow in the centre of the house plants not so high as to shade the back wall, then four Vines in front would be sufficient, and these four Vines would soon fill the house if more room were given to their roots. One of the easiest modes to do that would be to make openings in the front wall and let the roots out into an outside border, and you would still retain the advantage of inside planting. If you must have the roots inside, then the border might have been wider, and if you wished Vines at the back as well, then you might have had a similar border raised there and a pathway between them. Both of these borders might be covered with a trellis for plants, and the house would look neater and more furnished than it does now. If you forced the Vines at all, a fine lot of Strawberries in pots could be had, at least from your front border, if set on a permanent or temporary platform, and in all such houses it is well to have these platforms to move in pieces so as to be easily taken out. With your command of ventilation you may almost bid defiance to the smoke, if you have rather open gauze netting placed over the openings. In all early forcing this is an excellent precaution even where smoke is not excessive, as the air is sifted before entering, and never comes in in great gusts at a time. Hurricanes are, no doubt, essential for the purification of our general atmosphere, but we do not advocate violent tempests in our plant houses; we would rather keep them out. You may keep all kinds of greenhouse plants in your house, when the temperature is not raised artificially above 54°. When for the Vines you raise it above that, Pelargoniums, &c. should be gradually withdrawn.

HARDINESS OF BALM OF GILEAD, LEMON-SCENTED VERBENA, AND VERONICA (Celia).—The Balm of Gilead (*Dracocephalum canariense*), will not endure our ordinary winters in the open ground, though possibly it might succeed in a warm situation and in a dry, well-drained soil, protection being afforded it during severe weather by sticking in evergreen boughs around it, and wrapping a bay or straw band round it. The head might suffer, but it would in all probability push afresh from near the ground. The Lemon-scented Verbena (*Aloysia citrodora*), will succeed against a south wall if covered with dry straw and mats during severe frost, and the ground mulched around the stem with litter. It is neces-

sary that the soil should be light and well-drained. Most of the shrubby Veronicas will endure our ordinary winters in a warm situation under the protection of a wall or fence, a covering of mats, dry hay, or straw being afforded them during severe weather.

PEACH AND PLUM TREES UNHEALTHY (*W. M. S.*).—We do not think root-pruning would be of any avail. We would advise the trees being taken up and replanted, removing as much of the old soil as practicable, and replacing it with some rich turfy loam, such as the turf from a pasture. Now is a good time to perform these operations. Take up the trees carefully, preserving as many roots as possible. If the trees are old do not attempt to lift them, but remove the surface soil down to the roots, taking care not to injure these, replace it with some rich soil, and give a mulching of 3 inches of well-rotted cow-manure. In summer water liberally with liquid manure and water. We think your trees require support. Cool manure, such as cow-dung, is best for them.

YEW HEDGE PLANTING (*Idem*).—Now is a good time to plant Yews for a hedge. They should be 18 inches apart if the object is to make a fence to keep out cattle, whilst double that distance may be allowed if merely a screen is required. We have an excellent screen of Yew in which the trees are 4 feet apart. Under the Elms we should not plant them more than a yard apart, as they will not grow nearly so well as in the open ground.

MUSSEDA FRONDOSA CULTURE (*E. W., Charlton*).—There is no difficulty in blooming this plant if it is kept somewhat pot-bound, rather dry after it ceases growth, and fully exposed to light and air. Sufficient water must, of course, be given to keep the foliage from flagging. Your plant will bloom freely enough when it becomes older. Your compost is perhaps a little too rich. Do not allow the plant to be shaded by others overhead or adjoining it.

BEDDING PELARGONIUM CUTTINGS (*E. M. L.*).—Your cuttings only recently inserted would strike more surely if they had the benefit of a mild bottom; in fact, a little heat is necessary to ensure the rooting of Pelargoniums at this season. You may strike them in heat and well harden them off when struck, and they will keep safely if screened from damp and frost; but cuttings struck at an earlier season and without heat are less susceptible of damp and cold. Cuttings will now hardly succeed in a cold frame.

ACUCBA JAPONICA POTTING (*Subscriber*).—You will gain nothing by taking up the plants and potting them, as you must use very large pots, or deprive the plants of many of their roots, and that, instead of conducing to their future growth, will tend to retard it. A compost of rich rather light turfy loam, with a liberal addition of leaf mould or very old rotten manure, will grow the Acauba well. Afford it a situation protected from wind, and it will grow finely in the open ground, the soil being well-drained and in good heart.

SPORT OF BURNING BUSH PELARGONIUM (*Devoniensis*).—From the advanced period of the season we should leave the plant as it now is, with the sport upon it, until early in spring, when we would take off the branch and make a cutting of it. We should leave all the branches on the plant till then, for if you remove all except that exhibiting the sport, the latter will probably become so vigorous that it will lose its character. You will see before spring whether the sport is likely to prove permanent.

GUELDRS ROSE PRODUCING BERRIES (*Perry Duprey*).—The Gueldrs Rose (*Viburnum opulus*), does not produce berries in gardens so freely as it does in its natural habitats—in moist ground and by the sides of brooks and rivers, where its roots seldom suffer from want of moisture in summer. If you were to plant the common Gueldrs Rose (which is not generally that planted, but improved varieties of it, and these do not fruit so well as the species), in good garden soil, and supply it with water plentifully at the time of flowering and during dry periods in summer, we have no doubt that it would set its blossoms and fruit abundantly. It fruits with us in ordinary garden soil, its roots, no doubt, having found out a stream of water running near it.

APHIDES ON ROSES (*An Inquirer*).—Your best plan will be to syringe the trees with a solution of tobacco, made by pouring twenty gallons of water over 1 lb. of the ground tobacco. You may, as a preventive, paint the trees after pruning with a mixture of 1 lb. sulphur vivum, 1 lb. ground tobacco, half a pound of soft soap, and half a pound of lamp black, sufficient water being added to bring the whole to the consistency of thin paint. It should be applied with a brush, and before the buds begin to swell. February is a good time. In November a liberal dressing of manure should be given.

WINTERING MARÉCHAL NIEL ROSE (*Idem*).—Your plant in a pot would be all the better of being wintered in a cold pit along with Calceolarias. If kept in a house where there is heat it would probably be excited to growth, and that would tend to prevent vigorous growth next season.

DICKSONIA ANTARCTICA CULTURE (*Idem*).—This tree Fern requires slight shade when it is making its growth, and should be kept moist and well watered. It does admirably in a greenhouse or conservatory, the shade afforded by climbing plants on the roof being ample. It does not grow in winter unless excited by heat, which it ought not to be if it is expected to make a vigorous growth in spring. Keep it cool, but exclude frost. Do not allow it to suffer from want of water.

MELON SEED (*Dolores*).—Seed saved from Melons of this year's growth will be fit for sowing next year. The plants from it will, however, be more vigorous and less disposed to be fertile than plants from seed two or three years old. Plants from new seed are, however, more healthy, and afford finer fruit.

VINES MILDEWED AND PRUNING (*A. B. C.*).—You should at once dust the leaves with flowers of sulphur, likewise the wood where affected. Do not pluck off the leaves but let them fall naturally. The leaves from the Vines will not prevent you keeping bedding plants in the house, and you will injure the Vines by removing their foliage. They should not be pruned until the leaves fall; from the middle of December to January is a good time, and this we should think will be quite early enough for your Vines, as you say the wood is quite green. Give all the air possible, and keep a gentle fire going by day. Pruning should not be deferred beyond the time named. The dressing with sulphur may be done at the time of pruning, and again before the buds begin to swell. It is difficult to say whether your Vines will have an attack of mildew next year. If they have, the parts affected should be dusted with flowers of sulphur on the first appearance of the mildew.

WINTERING BEGONIAS (*Hollyhock*).—They should be kept in a dry house, and no water should be given beyond a little now and then to prevent them drying up or flagging. A temperature ranging from 40° to 45° is sufficient during winter. We presume you wish them to attain their greatest beauty in summer. If you wish them to grow then you must keep them moist, and in a house with a temperature of from 50° to 55° at night, and 60° to 65° by day from fire heat.

AZALEA LEAVES FALLING (*Julia*).—Your Azalea is losing its leaves from their being severely attacked by thrips. They will nearly all fall if they are so badly attacked as those sent us. Your remedy is to fill the house with tobacco smoke every other night for a week, and to syringe the plant forcibly with water in the morning following the fumigation. The house should be made quite full of smoke, calm evenings being chosen, and the foliage should be dry. Again fumigate whenever a thrips is seen.

KEEPING GRAPES (*T. T. H.*).—The best method of keeping Grapes cut from the Vines, is to take off a few inches of the wood with each bunch, and to seal the cut end with sealing-wax. You should then suspend the bunches by a string tied to the bottom of the bunch from the ceiling of a cool dry room, where they will in most cases hang with the berries not touching each other. They should be frequently examined, and mouldy berries taken out.

IVY TRAINING (*Idem*).—Your only plan is to keep the shoots well nailed to the wall, spreading them out so as to cover it evenly and regularly. A dressing of rich soil given now would most likely induce a more vigorous growth.

SELECT ROSES FOR A BEN (*Rosa*).—Lord Raglan, John Hopper, Madame Furtado, Louise Magan, Lord Macanlay, Gloire de Santeny, François Lacharme, Duc de Cazes, Duc de Rohan, Caroline de Sansal, Charles Lefebvre, Maréchal Vaillant, Sénateur Vaise, Vainqueur de Goliath, William Griffiths, Pierre Notting, Madame Victor Verrier, Prince Leon, Jules Margottin, Beauty of Waltham, Anna de Diesbach, Alfred de Rougemont, Géant des Batailles, and Duchess of Norfolk. All are Hybrid Perpetuals. We would have them dwarfs on the Manetti, but they will succeed on the Eriar in your soil.

SHALLOTS PLANTING (*Foreham*).—The best time to plant Shallots is during mild weather in February, or as soon afterwards as the state of the weather will permit. "Kitchen Gardening for the Many" will suit you. It can be had free by post from our office if you enclose five postage stamps with your address.

INDIAN RUBBER PLANT PROPAGATING (—).—It is increased by cuttings. The points of the shoots should be taken off with a sharp knife, and if it have two good joints in addition to the growing point, it will make an excellent cutting. The leaf should be removed from the lowest joint, beneath which the shoot should be cut across with a sharp knife. The cutting is to be inserted in a small pot placed within a larger one. Use a compost of equal parts of sandy peat and loam, and silver sand equal to both. After giving a gentle watering plunge the pots in a hotbed, and cover the cutting with a bell-glass, keeping it close but not very moist, otherwise it may damp off. It will not be necessary to cover with a bell-glass if the house be kept close and shaded. A slight shade from bright sun should be afforded. A mild bottom heat of from 75° to 80° is essential. When the cutting begins to grow remove the glass and shade by degrees. Spring is the best time to put in cuttings.

FRUIT TREES FOR VINERY (*Reader*).—Peach for a back wall of a small vinery, Noblesse; and Violette Hâtive Nectarine and Peach Apricot for pots.

ROYAL VINEYARD GRAPE (*E. W.*).—A tendency to produce abortive flowers, and consequently badly set bunches, is the great fault of this Grape. There are others which have the same tendency, and it is overcome by carefully shaking or drawing the hand over the bunch when it is in bloom, and shaking off the globe of moisture which settles on the stigma and prevents fertilisation. If this is done you will find the Royal Vineyard an excellent late white Grape.

NAMES OF FRUITS (*C. B., Maidstone*).—1, Hollandbury; 2, Beauty of Kent; 4, Like Tokers' Incomparable; 6, Parry's Pearmain; 7, Tokers' Incomparable. (*Henry Wade*).—1, White Costing; 2, Broad-eyed Pippin; 3, 5, 6, Not known; 4, Court-Pendu-Plat; 7, Claygate Pearmain; 8, Cockle Pippin. (*J. E.*).—The black Grapes are Black Hamburg, and the white are Muscat of Alexandria. (*Erraticus*).—1, Flower of Kent; 2, Ribston Pippin; 3, Nonsuch; 4, Hoary Morning; 5, Emperor Alexander; 7, Royal Russet; 8, Norfolk Beefing; 10, Selwood's Reinette; 11, Carel's Seedling; 12, Royal Pearmain; 13, Nelson Codlin; 14, London Pippin; 15, Winter Greening; 16, Skyhouse Russet; 17, Hampshire Pippin; 18, Ribston Pippin; 20, Golden Pippin; 22, Fearn's Pippin; 23, Christie's Pippin; 25, Sniffey Flat Cap; 27, Summer Golden Pippin; 28, Hollandbury; 29, Uvedale's St. Germain; 30, Chaumontel. (*B. F.*).—1, Fearn's Pippin; 4, 5, Dutch Mignonette; 6, Waltham Abbey Seedling; 7, Margil; 9, Caraway Russet; 10, Mank's Codlin; 11, Franklin's Golden Pippin; 15, Golden Reinette; 16, Marie Louise; 17, Norfolk Colman. (*Feritas*).—1, Ten Shillings; 2, Norfolk Beefing; 4, Lewis Incomparable; 5, Paradise; 6, Tulip; 7, Scarlet Tiffing; 8, Broadend. (*A. B.*).—1, Blenheim Pippin; 2, Golden Reinette. (*H. L.*).—1, Not known; 2, Coe's Golden Drop; 3, Catilae; 4, Beurre's Diel. The Apples, Fulwood (not Fulford), Lady's Delight, and Miller's Glory are old sorts, and are met with in West Lancashire. (*J. L. N.*).—Apples: 1, White Nouporell; 2, Royal Pearmain; 3, Winter Codlin; 4, Traumbington; 5, Bedfordshire Foundling. Pears: 1, Old Colmar; 2, Beurre's Diel; 3, Beurre d'Arenberg; 4, Beurre Chaireau. The plant is *Crataegus coccinea*. (*H. G. M.*).—Court of Wick.

NAMES OF PLANTS (*A Subscriber, Ballinacree*).—*Oxalis corniculata flava*. (*A Lover of Ferns*).—1, *Scelopendrium vulgare*; 2, *Adiantum capillus-Veneris*; 3, *Blechnum occidentale*; 4, *Polypodium dryopteris*; 5, *Epacris conspicua*. (*S. Thompson*).—*Ailanthus glandulosa*. (*R. S.*).—*Vicia sylvatica*. (*W. B. Upton*).—*Lycium vulgare*. (*G. B.*).—*Cobaea scandens variegata*. (*J. Kershaw*).—2, *Aspidium falcatum*; 3, (?) *Asplenium* (no fructification); 6, *Asplenium furcatum*; 9, (?) *Asplenium* (no fructification). (*R. H. Poynter*).—*Adiantum concinnum*. (*W. S. E.*).—1, *Dodia media*; 2, *Polystichum angulare*; 3, *Asplenium montanum*; 4, *Aspidium aculeatum*. (*Penelope*).—Ferns young and without fructification it is doubtful to name: green, *Athyrium Filix-femina*; brown, (?) *Lactrea Filix-mas*; pink, (?) *Cystopteris fragilis*; puce, (?) *Lactrea Filix-mas*. (*E. A. L.*).—*Trachymene* (*Didiscus*) *crerulea*. (*C. Raffill*).—*Lindera benzoin*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending October 22nd.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 16	29.854	29.783	64	45	51	51	S.	.00	Cloudy and damp; fine with white clouds; overcast.
Thurs. 17	29.705	29.686	62	41	50	52	S.	.04	Clear; fine; clear at night; rain.
Fri. . 18	29.719	29.645	61	36	50	53	S.W.	.03	Clear; clear and fine; rain; clear at night.
Sat. . 19	29.679	29.648	58	32	50	53	S.W.	.01	Overcast, fine; overcast; low fog, clear.
Sun. . 20	29.968	29.812	60	39	54	53	S.	.00	Foggy; very heavy dew; clear and very fine; clear.
Mon. . 21	29.040	30.101	58	31	53	53	S.W.	.00	Overcast; cloudy; clear at night.
Tues. . 22	30.177	30.128	62	50	55	52	S.	.00	Overcast; cloudy and fine; clear.
Mean	29.877	29.832	60.71	37.86	51.86	52.14	..	0.13	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

KILLING POULTRY.

RECOLLECTING what we have seen in the way of killing poultry, when fowls that were supposed to have been dead some time from broken neck, have been discovered walking about with their heads on one side; and when Ducks that have had pins stuck into their brains, and been hung up by their tied legs, have been hours afterwards trying to fly away, and squinting awfully—when we have seen the ten minutes weary sawing at the necks of the poor Gallinaeae, the breaking out into perspiration of the operator, and the air of unbelief in his assertion when he threw the poor creature down, saying it was dying, with a terrible gash in the throat, but the vital parts untouched, and saw it run away with its blood streaming, and at last die from sheer exhaustion—when we recollect having seen all this, we answer that for the uninitiated the most humane mode of killing is to chop the head off at a blow, and holding the bird by the legs and wings to allow it to bleed to death; but it is not a neat way, it is a sad mess.

The mode followed by all dealers is to break the neck. This method has the following advantages:—Death is very speedy; it is cleanly and less revolting; and it is certain the bird eats better than when all the blood is drained. The manner is thus:—The bird is taken by the legs and wings in the left hand, while the head is taken in the right, the body and neck being stretched to their extreme length; the head is then bent backwards and pulled at the same time. Dislocation takes place, and the body is held in the same position two or three minutes for the blood to run into the neck. Then, and not before, plucking should begin.

SALE ARRANGEMENTS AT BIRMINGHAM.

I FIND I was in error last week as to the origination of the new sale-regulations at Birmingham Show. I am sorry for the mistake; but the gentleman I referred to will be the first to wish it known that the credit of so good an arrangement is due to Mr. J. B. Lythall, the indefatigable Secretary. It is not the first time the Show has been indebted to Mr. Lythall's ingenuity.

So good is this last device, that I see already it has been adopted by the Somerset County Association to add to the attraction of their very liberal schedule for the Show at Weston-super-Mare. Respecting this latter Show, which may be regarded as the offspring of the Bristol one last year, I should have something to say; but knowing the great interest he has taken in it from the beginning, I leave the task to the pen of "Y. B. A. Z."—NEMO.

DESTROYING LICE ON POULTRY.

A SHORT time since some of your lady lovers of poultry were lamenting over losses of their stock by parasites. Now, I have kept fowls all my life, but I never pay any extraordinary amount of attention to them beyond giving them plenty to eat, and clean water to drink, and I let the chickens and Ducks have a dry board to brood on. My chickens hardly ever die, and I have always been fortunate. This year one hen brought me fourteen young ones out of fifteen eggs; a second fifteen out of fifteen; a third nineteen out of twenty; and a fourth twelve out of thirteen. I have also had nineteen pullets out of twenty-six chickens, many of which have been laying for six weeks. My

only drawback this year has been that the young ducklings would just break the shell of the eggs, and then die; for that I cannot account.

The best plan for any one to adopt when there are any insects on fowls, is to let these sleep on deal shavings, and the turpentine will soon drive away all insects. I sometimes sprinkle it on my dog's bed and the fleas soon leave.—H. W., *Halifax*.

BRISTOL AND CLIFTON POULTRY SHOW.

THE most important part of a lady's letter is said to be the postscript. Will this apply to the present P.S. to my remarks on this Show in a recent number? I had it on the point of my pen, to say —, no, to write, that I regretted there was to be no alleviation of the Great Western Railway's infamous charges. Last year they were most exorbitant. Is there no possible relief this year?

I venture to say that if in the regulations of the Bristol and Clifton Show, there had been a promise of charge for carriage only in one direction, it would have made a difference of one hundred more entries.

It is these large, leading shows that I want to see fighting this question out. Birmingham, for instance, refusing a show unless relief were granted, the following year we should be repaid by the £20 silver cup, the gift of the railways, for the best pen in the Show, and our specimens into the bargain carried at a nominal rate. If the railways can do it for cattle, they ought to do it for our pets, the most crowded part of the show, and the portion that makes the increased passenger traffic. I mention the Great Western Railway especially, for it indulges us with 50 per cent. extra both ways. A letter this morning from a gentleman in Devonshire, exhibiting at Chelmsford, says he thinks that he shall pay only one way to that place, and that he expects his carriage to that place to be less than to Bristol, and his entries will accordingly be more. I have said Bristol was "wide awake;" the Committee will have an additional claim on our gratitude, if they would take this question up.

I shall have a few words to say, I hope, by-and-by, on this matter as regards Lord Tredegar's Show, at Newport. I have written to Mr. Palling, recalling the memorial to his mind, and I trust I may shortly have to say that he has been successful, meanwhile I shall withhold any entries at Newport.—Y. B. A. Z.

PHILOPERISTERON SOCIETY.

THE Philoperisteron Society held its first meeting for the season on the 8th inst. at the Freemasons' Tavern, when the quality rather than the quantity of the Pigeons exhibited was observable. Amongst them were some good specimens of Yellow and Blue Beards, Yellow and Blue Balbs, and Blue English Owls shown by the President, Mr. Esquilant; Almonds by Mr. Merck; Black, Dun, and White Carriers by Messrs. Carrell, Elze, Square, and Hedley, who each showed such birds as would catch the eye of any judge if sent to a public exhibition. The Honorary Secretary's (Mr. Hedley). Barbs were some of his best, including Blacks, Reds, Yellow, and Duns, the latter colour to all breeders being the most useful, and one we should be glad to see more frequently at other exhibitions, feeling confident that good specimens will meet with due reward at the hands of the judge.

The next meeting of this Society will be held as above on the second Tuesday in November, between 7 and 9 P.M.; visitors admitted on presentation of their cards to the Secretary.

THE SOMERSET POULTRY EXHIBITION to be held at Weston-super-Mare, offers a most liberal list of prizes, varying from £3 downwards, with the addition of nine silver cups, one of

which is of the value of ten guineas, and five of them seven guineas. Messrs. Hewitt, Teebay, and Tegetmeier, are named as the Judges.

WOLVERHAMPTON POULTRY SHOW.

This Meeting, held on the 18th, 19th, and 21st inst., was the second that has taken place under the management of the Wolverhampton Committee, and a more orderly, well-conducted Show of poultry could not be desired. The Committee being composed chiefly of old and experienced poultry-fanciers, and energetic ones too, and having an indefatigable and most courteous honorary Secretary, this Show promises to become not only a very extensive, but also a most popular one. The weather contrasted most favourably with that of the last year's meeting, when rain fell incessantly; this year, however, the show was opened on as fine and genial an autumnal day as could be wished for. The attendance was, therefore, very good, and embraced most of the leading families for many miles round.

Grey Dorkings were a large and important feature of the Show; and it is worthy of mention that it was Mr. Shaw's pen of excellent rose-combed ones that ran a close second for the valuable silver cup given by Sir John Morris for the best pen of poultry exhibited, quite irrespective of variety, and this in a very excellent competition from a selection, by the Judge himself, of twelve of the best first-prize pens. The *Spanish*, except the winning pens, were certainly not equal to those of last year, and the same remark, though scarcely with equal force, applies to the class for *White Cochins*. The Buff as well as the Partridge-coloured Cochins, however, made most ample amends for this shortcoming. In both of these classes the perfection of colour was a most remarkable feature, and such a pullet as was exhibited in the Partridge class by Mr. Tudman has scarcely ever been known. In the Buff class the first-prize Cochins were so good that they were at once "snapped up" at £30; and as other single birds of this variety were easily sold on the spot for £5 each, surely the mania for Buff Cochins is by no means extinct in the midland districts. Mr. Tomlinson succeeded in winning the amateur's silver cup, as he also did last year, with very excellent birds of this colour. The *Hamburghs* were not so good as we hoped for; but both *Brahmas* and *Polands* were excellent. In *Game* the Black Reds were infinitely superior to all others. The pen belonging to Mr. Fletcher, of Manchester, secured for that well-known breeder a first prize in their own class, the *Game* silver cup for the best pen of any variety of *Game* fowls, and Sir John Morris's silver cup, given to the "best pen of poultry exhibited." Many of the *Bantams* were very good, and the Variety and Selling classes were especially so. In the Any variety class of *Ducks* the Exhibition was, perhaps, never equalled; Shell Ducks, Carolinas, Wild Ducks, Ruddy Shell Ducks, White Muscovies, and a host of other varieties in most excellent feather competing. This class and the very extensive collection in the Any other variety class for *Pigeons* proved the two especial gems of the Wolverhampton Show. *Rabbits* were numerous and good. That which took the first prize for length of ear had ears 23½ inches long by 5 inches wide. Those of the second-prize Rabbit were 23 by 5½ inches. Seventeen years ago 20 inches were deemed an extraordinary length of ear. The decorations of the Corn Exchange, which is certainly most admirably suited to the purposes of a poultry show, were most effective. Few Shows have proved more satisfactory, and with a revised prize schedule continued success may now be relied on.

The following is a list of the awards:—

YOUNG BIRDS.

DORRINGS.—First, E. Shaw, Plas Wilnot, Oswestry. Second and Third, Hon. H. W. Fitzwilliam, Wentworth Woodhouse, Rotherham. Highly Commended, J. G. Pearson, Market Drayton, Salop; Mrs. Bailey, Longton; Countess of Dartmouth, Wolverhampton; M. Eriksbank, Manchester. Commended, Mrs. Bailey; E. Ryder, Harryton, Stockport. *Cockerel*.—Prize, Rev. E. Bartrum, Great Berkhamstead, Herts. Highly Commended and Commended, Mrs. Bailey.

SPANISH.—First, J. Walker, Wolverhampton. Second, J. R. Redbard, Wington, Bristol. Third, Mrs. M. Farrand, Dalton, near Huddersfield. Highly Commended, Mrs. Hunter, Wolverhampton; J. R. Redbard. *Cockerel*.—Prize, W. Cawley, Alderley Edge, Manchester.

COCHIN-CHINA (White).—First, A. Williamson, Leicester. Second, G. Lamb, Compton, Wolverhampton. Third, A. O. Worthington, Burton-on-Trent. Highly Commended, A. O. Worthington. Commended, — Hobson, Walsall; G. Lamb; W. A. Taylor, Manchester. *Cockerel*.—Prize, G. Lamb.

COCHIN-CHINA (Partridge).—First, E. Tudman, Whiteburch, Salop. Second, C. Sidgwick, Keighley. Third, J. Horrocks, Tonge, Middleton, near Manchester. Highly Commended, J. G. Pearson. Commended, E. Tudman. *Cockerel*.—Prize, W. A. Taylor. Commended, E. Tudman.

COCHIN-CHINA (Buff and Cinnamon).—First, G. A. Crewe, Derby. Second and Cup, H. Tomlinson, Birmingham. Third, H. Wade, Birmingham. Highly Commended, W. A. Taylor. Commended, H. Mapplebeck, Birmingham. *Cockerel*.—Prize, W. Bayliss, Walsall. Highly Commended, W. A. Taylor.

HAMBURGS (Golden-spangled).—First, N. Marlor, Manchester. Second, J. Roe, Hadfield, Manchester. Third, J. Davies, Harborne, near Birmingham. Highly Commended, T. May, Wolverhampton; T. Blake-man, Tettenhall; J. Andrew, Ashton-under-Lyne; I. Field, Dudley; E. Brierley, Heywood; H. Pickles, jun., Earby, Skipton. Commended, W. A. Hyde, Ashton-under-Lyne. *Cockerel*.—Prize, E. Burton, Alton, Staffordshire. Highly Commended, Miss S. Cotes, Newport, Salop.

HAMBURGS (Silver-spangled).—First, Messrs. Ashton & Booth, Mottram, Cheshire. Second, H. Robinson, Beidton. Third, S. Fielding, Trentham, Staffordshire. Commended, W. Tatton, Leek; J. M. Kilvert, Ludlow.

HAMBURGS (Golden-pencilled).—First, T. Wrigley, jun., Tonge, Middleton. Second, S. Smith, Northwain, Halifax. Third, W. R. Park, Melrose. Commended, Rev. W. Sergeantson, Shrewsbury. *Cockerel*.—Prize, F. D. Mori, Stafford.

HAMBURGS (Silver-pencilled).—First, Messrs. W. & J. Bairstow, Fearncliffe, Bingley, Yorkshire. Second, J. Platt, Deon, near Bolton. Third, W. R. Park. Commended, S. Fielding. *Cockerel*.—Prize, Messrs. W. & J. Bairstow.

POLISH.—First, W. A. Taylor. Second, P. Unsworth, Lancashire. Third, R. Charlesworth, Manchester. Highly Commended, R. P. Williams, Clontarf, Dublin; P. Unsworth; J. Powney, Calne, Wilts. Commended, J. Mansell, Longton; R. P. Williams.

BRAHMAS.—First and Second, Mrs. Hurt, Derby. Third, A. O. Worthington. Highly Commended, Hon. Miss Douglas Pennant, Penryn Castle, Banger; A. H. Verity, Northenden, Cheshire. Commended, J. Statter, Liscard; T. C. Cookson, Rugeley; Hon. Miss Douglas Pennant; M. Brooksbank. *Cockerel*.—Prize, J. K. Fowler, Aylesbury.

GAME (Black-breasted Reds).—First and Cops, J. Fletcher, Stoneclough, Manchester. Second, W. H. Cadwallader, Compton, Third, Mrs. Sproston, Wednesfield Heath. Commended, W. Horton, Albrighton.

GAME (Brown-breasted Reds).—First, J. Platt, Swanlow, Cheshire. Second, Messrs. Church & Houlding, Nantwich. Third, A. B. Dyas. Commended, J. Hodgson, Bradford.

GAME (Duckwings).—First, G. Swift, Fulford, Stone. Second, S. Fielding, Third, W. Dunning, Newport, Salop. Highly Commended, W. Horton, Albrighton. Commended, J. Fletcher.

ANY VARIETY.—Prize, J. Fletcher (Files).

FRENCH.—First and Second, Col. Stuart Wortley, Grove End Road, London. Third, W. R. Park (Crève Cœur). Commended, J. K. Fowler. *Cockerel*.—Prize, J. K. Fowler (Crève Cœur).

BANTAMS (Black-breasted Reds).—First, J. W. Morris, Rochdale. Second, Messrs. H. & G. Cooper, Walsall. Third, J. Adkins, jun., Walsall. Highly Commended, E. Aykroyd, Bradford. Commended, A. L. Vernon, Deansfield, Brewood; J. Adkins, jun.

BANTAMS (Any variety except Black-breasted Reds).—First, W. A. Taylor. Second, Rev. P. W. Story, Daventry (White-feathered legged). Third, R. Charlesworth, Manchester. Highly Commended, Messrs. S. and R. Ashton, Mottram, Cheshire. Commended, Sir J. Morris, Elmsdale, Wolverhampton (Silver-laced); T. C. Harrison, Hull.

ANY VARIETY NOT PREVIOUSLY MENTIONED.—First, C. Sidgwick (Black Hamburgs). Second, Sir J. Morris (Negrees). Third, M. B. Riley, Oveden, near Halifax (Andalusian). Highly Commended, Mrs. Hamilton, Tyddyn, Montgomeryshire (Silky Fowl); C. Sidgwick (Black Hamburgs). Commended, R. Charlesworth (Malay).

SELLING CLASS.—First, A. Williamson, Leicester (White Cochins). Second, J. Walker, Wolverhampton (Spanish). Third, W. Tatton, Leek (Silver-spangled). Highly Commended, Sir J. Morris (Negro); Rev. W. P. Story (Japanese Bantams); S. Fielding (Silver-pencilled Hamburgs); Miss M. E. Lamb (Negrees); E. Shaw (Grey Dorkings). Commended, W. Horton (Duckwing Game); N. Russell, Ludlow (Dark Brahma); Miss A. M. Hurt, Littleover, Derby (Silver-spangled Hamburgs); W. A. Taylor.

TURKEYS.—First, E. Leech, Rochdale. Second, F. E. Richardson, Uttoxeter. Highly Commended, E. Ryder, Stockport; F. E. Richardson.

GEES.—First, J. K. Fowler. Second, Mrs. Hamilton (Grey). Highly Commended, T. Bantock, Wolverhampton (White); E. Leech; S. H. Stott, Rochdale (Toulouse). Commended, F. E. Richardson (Toulouse).

DUCKS (Aylesbury).—First, J. K. Fowler. Second, E. Leech. Highly Commended, J. K. Fowler; Rev. E. J. Thompson, Bury St. Edmunds; Mrs. Clarke, Bedford. Commended, G. A. Crewe.

DUCKS (Rouen).—First, S. H. Stott. Second, J. Fielding. Highly Commended, T. Burgess, Macclesfield; K. P. Williams; E. Leech; Mrs. Clarke, Bedford. Commended, F. E. Richardson (Carolina).

DUCKS (Any other variety).—First, R. P. Williams (Ruddy Shell Ducks). Extra Prize, Sir J. Morris (Carolina). Highly Commended, T. J. Harrison, Kendal (Domesticated Wild Ducks); R. P. Williams (shell Ducks); Mrs. Clarke. Commended, T. C. Harrison.

PIGEONS.

TCMBLERS.—First, R. Fulton, Deptford (Mottled). Second, H. Yardley, Birmingham. Highly Commended, J. E. Beward, Coventry; R. Siddall, Sheffield; J. Ford, London (Almond); W. Choyce, Sibson; J. Fielding, jun., Rochdale. Commended, R. Fulton (Almond).

CARRIERS.—First and Second, J. C. Ord, Pimlico (Dun). Highly Commended, H. Yardley; F. Elze, Bayswater, London; J. C. Ord; K. Fulton.

POUTERS.—First, J. E. Beward. Second, R. Fulton. Highly Commended, S. Ladd, Calne. Commended, H. Yardley; S. Horn, Kettering; Sir J. Morris, Kt.; R. Fulton.

FANTAILS.—First and Second, H. Yardley. Highly Commended, J. W. Edge, Birmingham; W. R. Park; J. E. Beward; W. Choyce, Warwickshire; F. Elze.

ANTWERPS.—First, J. Cox, Wolverhampton. Second, E. Hutton. Highly Commended, H. Yardley; J. W. Edge, Birmingham. Commended, J. Thompson, Bingley, Yorkshire.

RUNTS.—First, H. Yardley. Second, R. Fulton. Highly Commended, H. Yardley.

DRAGONS.—First, D. Bromley, Bolton. Second, H. Yardley. Highly Commended, D. Bromley; J. Thompson; J. W. Edge; H. Yardley.

ANY OTHER VARIETY.—First, H. Yardley. Second and Third, J. Fielding, jun., Rochdale (Barbs and Owls). Extra Third, J. Thompson. Highly Commended, J. W. Edge; J. Thompson; W. Choyce (Black Magpies); H. Yardley; A. H. Stewart (Nuns); F. Elze; J. Fielding (Owls); F. Waitt, Sparkbrook, Birmingham (Blue Fairies). Commended, J. E. Beward (Archangels); R. Siddall, Sheffield; A. H. Stewart (Jacobins); J. Thompson; F. Waitt (Yellow Turbats, Archangels, Red Fairies).

RABBITS.

LONGEST EARS.—First, W. Allison, Sheffield (Fawn Buck). Second, M. Millington, York (Sooty Fawn Buck). Highly Commended, W. Newsome, Leeds (Black Buck).

BLACK AND WHITE.—First, W. H. Webb, jun., Deepfields, near Bilston (Black and White Doe). Second, H. Eech, Birmingham. Commended, J. Jinks, jun., Birmingham (Buck).

YELLOW AND WHITE.—First and Second, H. Yardley. Commended, Messrs. Wagstaff & Hanson, Thorne, Doncaster.

SELF-COLOUR.—First, Messrs. Wagstaff & Hanson. Second, W. Newsome (Grey Doe). Highly Commended, H. Yardley (Fawn Buck). Com-

mended, J. Hinecks, jun., (Black Doe); H. Yardley (Fawn Doe); G. D. Tomlinson, Birmingham (Blue Buck); M. Millington, York (Fawn Buck).
ANY COLOUR NOT PREVIOUSLY MENTIONED.—First, M. Millington, York (Blue and White Doe). Second, W. Worrall, Smethwick (Tortoiseshell Doe). Highly Commended, H. Yardley (Blue and White Buck); W. New-some (Blue and White Doe). Commended, J. Hinecks (Grey and White Doe); Messrs. Wagstaff & Hanson.

WEIGHT.—First, C. Gravil, jun., Thorne, near Doncaster (Spanish Tortoiseshell). Second, R. Hales, Wolverhampton (Black and White Buck).

Edward Hewitt, Esq., of Sparkbrook, Birmingham, was the Judge for Poultry and Pigeons; those for Rabbits were Mr. G. Lawrence and Mr. Guest, of Birmingham.

CHELMSFORD POULTRY SHOW.

WITHOUT doubt the Corn Exchange at Chelmsford is one of the best buildings in the kingdom for a poultry show, being as good as the Crystal Palace itself as to the general diffusion of light, and as having sufficient capacity to accommodate with ease some seven or eight hundred pens of poultry comprising every variety. With these peculiar advantages, supported by a very hardworking Committee, this Show stands very high in the ranks of our poultry exhibitions. Fine weather, too, this year was a great advantage to this meeting.

In *Grey Duckings* the competition was extraordinarily good—so much so, that out of a very large entry only five pens escaped mention in the list of premiums. Even when subjected to so severe a competition, however, Dr. Campbell succeeded in the unexpected feat of securing the whole of the three prizes for this variety with birds that will no doubt compete for a considerable time if now carefully attended to. The Silver-Grey Dorking class was not so good, as most of the pens proved not true to feather. White Dorkings were superior, but by no means numerous. The generality of the *Game* fowls shown were excellent, and we much regretted to find one of our most successful general exhibitors thrown completely out by competing with old birds. This evidently arose from mistake, and not from any disposition to deceive; for these pens were exhibited naturally, and the Judges were convinced of their age at a glance, though the competition was restricted to chickens of 1867. They were infinitely the best pens, but here again the evil of not carefully perusing the prize schedule before making entries was fully exemplified. *Cochins* and *Spanish* were remarkably good, as also were the *Dark Brahmas*. The *Humburgs* and *Polish* were excellent, as well as many of the *Bantams*.

It was in the useful kinds of poultry that this Show was chiefly remarkable. *Geese* of 12 lbs. weight the pair, *Turkeys* of nearly 26 lbs., *Aylesbury Ducks* of 16½ lbs. weight, and *Rouens* of 14 lbs. weight the couple, being actually very closely pressed by competitors that were less successful in taking premiums.

To this Show a most useful addendum was made in the shape of separate classes for dead poultry, "dressed, but not drawn." A brief reference to weights will prove how closely these premiums were contested, all being birds of the year. The pairs of dead chickens weighed respectively 6 lbs. 9 ozs., 13 lbs. 10 ozs., 13 lbs. 12 ozs., 12 lbs. 9 ozs., 13 lbs. 8 ozs., 10 lbs. 4 ozs., 10 lbs. 14 ozs., and 11 lbs. 7 ozs.; whilst the ducklings ranged from 11 lbs. 1 ozs. to 13 lbs. 4 ozs. The prize chickens, and also the Ducks, were, however, the product of the same breeder, Mr. Dowsett. The chickens were a cross between a Light Brahma cock mated to a Grey Dorking hen, and singularly enough, whilst exceedingly small in bone and exquisitely delicate in flesh, were all four perfectly white-legged, and without the slightest approach to an inclination to feather on the leg as in the Brahma, though not one of the four prize birds showed the extra Dorking toe. They had not been purposely fattened as is the case with the Surrey poultry, which makes the weights more remarkable. We gave the prize list in last week's issue. Messrs. Hewitt and Tegetmeier were the Judges.

NEW BOOK.

Science with Practice. A Series of Agricultural Papers. Vol. 1
 London: Longman & Co.

THE title of the volume before us gives an imperfect idea of its contents, though it is quite true that the contents are a combination of Science and Practice on miscellaneous subjects for the improvement of Agriculture. The volume, in fact, contains the two first numbers of a serial, occupied by lectures delivered at the Agricultural College at Cirencester—an educational institution well deserving encouragement by the farmers of England, for it can give their sons not only a sound general education, but, in addition, an education appropriate to the cultivation of the soil.

As long since as 1799 Marshall published a proposal for the establishment of a College of Agriculture; but it was not until 1839, when Mr. Duppa revived the subject that any attempts were made to found such an Institution, and they resulted in the establishment by private enterprise, during 1845, of the Agricultural College at Cirencester. It does not fall within our province to detail the system of education, or of cultivating the farm annexed to it, there pursued, but we may observe that both are so

successful, and the names of the lecturers whose teachings appear in this volume are so favourably known, that we regret that the lectures are not systematised. Such men as Bailey Denton, Ransome, Church, Harrison, Welford, Wrightson, &c., might under the general supervision of the College Principal, the Rev. Mr. Constable, produce "A System of Agriculture" that would be accepted as a text book.

The Lectures in the volume before us are on Drainage, Ploughing, Wheat culture, Dairying, Leases, Rotation of crops, and other topics, but we will confine ourselves to one appropriate to our columns—"Farmyard Poultry, profits and management. By John Algernon Clarke." It may be characterised in one sentence—It is a record of the sound practice of the writer. The management of fowls from the building of the hen-house to the fattening for table use is detailed, and we have scarcely marked a sentence of the teaching from which we dissent. A few extracts will enable our readers to estimate the contents of the Lecture.

"The truth is, that only a triding portion of what poultry eat at a farm homestead involves any outlay, the birds picking up off the ground and redeeming from waste probably one-half of their living; while the greatest proportion of the other half consists of the tail and refuse corn, which is of only nominal value. I am speaking of course of ordinary cases, where fattening heavy and early birds is not made a regular business, to which other departments of farm management have to give place. I know, for instance, of a yard where the mistress sells over £20 worth of eggs, beside furnishing a plentiful house consumption, raising pallets for keeping up her stock of one hundred hens, and feeding a few birds for her own table. The purchased food costs but a few shillings per year; the collection of eggs being the chief expense. I could name another yard where, for years, the proceeds from a brood stock of sixteen cross-bred hens with two cocks, and six ordinary brown Ducks with one Drake, have been over £25 per annum, in addition to the household supply of birds and eggs; no food bought excepting a few pounds' weight of chicken rice, only a few eggs sold, and the birds disposed of at the country market price of 2s. 6d. to 3s. 6d., and occasionally 4s. 6d. per couple. The henwife has been paid one-third of the gross receipts; but if the farmer's wife herself attended to the fowls, of course this deduction would all be saved."

"A good profit may be made by the farmer's wife when selling eggs and birds at common market prices; and though the total income from this source may be not very large, yet it is too important to be sacrificed for lack of a little wholesome interest and attention."

"The floor is not so well of brick or stone slabs as of earth, well rammed down and covered with loose gravel. This is to avoid harbouring the great pests of the henhouse, fleas. Dimensions will be very much matters of fancy, but shun overcrowding. Architects often plan roosting houses with perches one higher than another, rising like a ladder from floor to ceiling, taking care that one is not placed directly over another, as in that case the droppings of the upper row would fall upon the birds below. But all lofty perches are objectionable; heavy fowls injure their feet in jumping down; for though they will fly up or walk up a ladder to bed, they will generally take the shortest cut down in the morning. The best plan is to have perches all on a level, 2 to 2½ feet from the ground; the best perch being a wooden bar of 3 or 4 inches in breadth; and if supported by legs like a stool, so as to be readily moved, so much the better. Clumsy birds like *Cochins* prefer a roost at even lower elevation, unless a very easy ascent is prepared for them. It is not necessary to have a separate house for laying, provided the nests be at the side, far enough from the perches. But a sitting-house should be prepared, in order that the sitting hens may not be disturbed by the other fowls. I need scarcely urge the importance of cleaning out the houses, say twice a-week, and of once or twice in the summer cleaning and limewashing the whole of the interior. Various notions are seen in the matter of nests. Some poultry-keepers have a number of wooden cells, like pigeon holes on a large scale, with a hinged flap or door, or a slide, in front to fasten in nestday sitters and to keep out intruders. The nests in my own hen-house are simply rectangular cells made of board 20 inches high, and 18 to 20 inches long and broad, set upon the floor and close to the wall—a bar running along the front edges of the boards, to keep the eggs from rolling out. But round shallow dishes of wicker are good; so also are shallow pans of earthenware half filled with sand; and some managers prefer simple cells of loosely laid bricks. As to the proper fibrous or other material for bottoming the nest, avoid long straw, for this is liable to pull eggs out of the nest by getting entangled about the hen's legs. Hay, again, is safer, but harbours abundance of vermin. The best materials are coco-nut refuse or short straw, dusted with flowers of sulphur to expel the fleas; while a sod with rough grass on it makes a good and moist foundation for all."

"A common error is to coop successive broods in the same small enclosure, probably because this is near to the kitchen door, and convenient for the constant attention which is required. But separation is a main point in rearing healthy birds. Distribute your coops about your yards, of course choosing safe and sunny places; and if your early broods occupy a space before your house, you may put the later broods on a plot behind, and so on, always allowing a considerable in-

terral to elapse before following upon the same ground, to avoid getting the walk 'tainted,' as it is termed, with liability to disease."

FEEDING BEES.

I FIND it stated that the right time of feeding bees is in the autumn and spring, and not mid-winter or cold weather. Now, I have two hives: No. 1 is a swarm of 1866, in a common straw-hive, they are apparently strong; No. 2 is a second swarm from No. 1, which came off on the 17th of June this year (the first swarm I lost, it settled in a hole of an old ash tree, 20 feet from the ground and 50 yards from my bee-house). No. 2 is in one of Neighbour's improved cottage hives, and I fear very weak indeed in numbers. For two or three weeks after being hived the bees made little or no progress, but they have since made four or five combs about halfway across the hive, and from top to bottom nearly; the bees from the first clustered at one side close to the window, and never go near the other side of the hive. All or most of the cells that I can see are sealed-up. None of the bees from either hive have come out for the last three weeks or more, owing, I suppose, to the cold and wet weather, although garden flowers are still plentiful with me.

Now, may I ask you to say when I should commence and when leave off feeding for the autumn, and when again begin and leave off for the spring? Do you think that by liberal feeding I can save No. 2? Will moist sugar (3 lbs. to 2 lbs. of water), answer as well as loaf sugar for food? I live within a mile of the sea, on the bleak coast of the county of Durham, and I do not think there are any bees kept within miles of my residence, although No. 1 was a "come-by-chance" last year, but where from is a mystery.

I suppose I can do nothing to get back the swarm lodged in the ash tree; but probably by watching (if the bees live over the winter), I may have one or more swarms from them next year.—*AFIS.*

[Feeding by means of an inverted pickle-bottle should commence immediately, and be concluded as soon as possible. The general rule is that all feeding should be finished by the end of this month (October). The time for spring feeding varies in different localities, but it may commence as soon as the risk of frost and snow is past, and be continued, if necessary, until the bees are able to maintain themselves. No. 2 may probably be saved by the immediate administration of a liberal supply of food and extra protection during the winter. We much prefer lump to moist sugar for bee food. If you could cut down the old ash tree you might remove the hollow part with the bees to your own garden, thereby converting it into what the Germans call a "klotz-hive."]

BEES IN SOUTH LANCASHIRE.

THE year 1867 will long be remembered in this part of the county (South Lancashire), being one of the worst for bees ever known. I began this spring with eight stocks, which are now, October 14th, fifteen, all of good weight. Had it not been for the beath I should have had to feed them all.

My first swarm was on Midsummer-day, my last July 9th, and this, with several others, I took to the moors on the 17th of August. I brought them back on the 30th of September, and just to show your readers that bees of the Ligurian strain are better workers than the black bees, I may state that the swarm of July 9th, besides making the weight of the hive 30 lbs., gave me a small bell-glass of 7½ lbs., which I think for so late a swarm is not bad.

I communicated to your Journal last autumn, the fact of one of my queens being connected with a Ligurian drone at an apiary five miles distant. That stock produced the swarm named above, on July 9th. The parent stock now shows six well-marked bees of the Ligurian strain to one of the black. Before swarming the black bees were most in number, so that unless the young queen had cohabited with a Ligurian drone, the marks upon the hybrids do not die out, but increase in the following generation. The nearest place to mine where Ligurians are kept, is five miles off. I have not seen the young queen, but intend looking at her majesty the first fine day. I have her in one of Huber's improved hives, which in my experience, far surpasses any other kind I have yet seen for manipulation. I have Nutt's, Neighbour's, and Woodbury's hives, besides straw ones. Several of my bee friends are having some made from my pattern.

I think it would gratify your readers if some or most of the

bee-masters would let us know what the result of this season has been with them.—*DENTON.*

OUR LETTER BOX.

CHICKENS WITH CROOKED TAILS (J. T. H.).—We have never had crooked tails among our chickens without being able to trace them to one of their ancestors. We know of no accident to cause them that would not be attended with worse results than the twist of a tail. We know no cure for it, but we are nearly sure if close examination be made, a crooked back will be found among the parents. Nothing in the way of beauty, good points, or size, will justify the use as a stock bird, of one with a crooked back or tail.

BLACK BANTAMS' FACES—COLOUR OF HOUDANS (An Inquirer).—Black Bantams should have red faces and white ear-lobes. Houdans should be black and white splashed or spotted. It is difficult to have the cocks as perfect as the hens. They may be bought at any price, from 12s. each, according to the quality of the birds.

FEATHERS QUILL-ROUND (Lancashire).—A cooling diet is very essential in such a case, and we know nothing better than lettuce, especially such as have run to seed. We have found so much benefit from these this season, that we have determined to grow some next year for the purpose. We always use compound sulphur ointment on bare spots. It will sometimes happen that from injury to the skin, familiarly called "barking," the surface will assume a dry shining appearance, and be, in fact, as hard as goldbeater's skin. In this case the end of the feather will be unable to penetrate, and will, consequently, grow inwards between the skin and the flesh. Pass a stout needle under the feather as near as may be to the quill, make the opening as small as you can, and carefully draw the feather out. Avoid meat feeding and all stimulants.

CHARACTERISTICS OF HOUDANS (Subscriber).—Houdans must have the small spikes; also crests or small receding top-knots, whiskers, and beards. Failing these, they are not Houdans, and if properly judged should not take a prize; certainly not against those that possess them.

HEN WITH MALE HABITS (Harriet).—The bird you mention as calling like a cock, is passing into an unnatural state, and we advise you to consign her to the stock-pot. The appearances you note will increase daily till they become an insufferable nuisance. The cause of the change is an injury that precludes the possibility of any future profit being derived from her.

CROSS BETWEEN WHITE SPANISH AND DORKING (Idem).—Spanish is never a good cross with Dorking. The only advantage the latter could gain would be a slight increase in the number, and a considerable increase in the weight of eggs. The sacrifice would be, loss of symmetry as a table bird, and loss of merit as an excellent sitter.

COLOURED FOWLS AND PIGEONS (J. M., Wellington).—We do not know the means by which "tricksters" colour poultry and Pigeons; and did we possess a knowledge of this secret we should hesitate before we published that of which a dishonest use might be made.

INCUBATORS (J. E. Newman).—You must write to those who have advertised.

GOLDEN PHEASANT'S PLUMAGE FADING (P. Pictus).—There are three causes for a fading plumage such as you describe. First, bad health and want of condition; second, extreme age; third, having been frequently pulled for the sake of the feathers. The topping and tippet of the Golden cock Pheasant when he is in full feather is worth nearly the value of the bird, and it is not uncommon to have one plucked twice or thrice a year. After this the producing power is lessened, and a plumage such as you describe is produced.

FOUL BROOD—COLLATERAL HIVE (G. W. D.).—Foul brood is, as its name implies, a disease of the brood, a portion of which dies at a certain stage, either immediately or soon after the previously coiled-up worms have extended themselves in their cells and have been sealed-up by the bees. These defunct larvae appear to undergo a peculiar kind of decomposition, by which their bodies are converted into a brown liquid, which gradually thickens by evaporation, until it attains the consistence of bird-lime, and emits a very unpleasant smell. At first only a few die; but, as these are not removed by the bees the infection spreads, and the mortality increases until the brood-combs become mere disgusting masses of putrid larvae; and the stock, after for some time giving off an offensive odour, which may even be perceived at a distance, ultimately perishes from the births failing to keep pace with the deaths among the population. This disease, being very infectious, is the direct calamity which can befall the bee-keeper, and is best treated like the cattle plague, by being at once "stamped out" by the destruction of the colony or colonies in which it first appears. We know of no mode of distinguishing it in common hives until it has made such advances that its presence becomes manifest by the emission of that repulsive odour which is peculiar to the disease. It is, however, very fortunately not so prevalent in England that you need fear to purchase bees from an apparently prosperous apiary in which none of the hives emits an unpleasant smell. The entrances to the different compartments of your contemplated "acht-bueter," as it would be styled by the Germans, are much too near together, and by their close proximity would cause constant quarrels and inalienable waste of life. Neither should the bars be surmounted with glass, which would condense a very injurious amount of internal moisture. Hives are best kept as far asunder as may be convenient. We like the entrances to be at least 4 feet apart, and allow more whenever practicable.

HYBRIDISING BIRDS (Dickey).—A Lark and a Canary will not pair.

BURNING COKE IN AN AVIARY (Trotters).—If there is a pipe-chimney to the stove, so that the fumes of the burning coke would all pass into the open air, no injury would occur to the Canaries. If the fumes escaped into the aviary they would injure, probably kill, the birds.

GOLD FISH (R. F. M.).—There is no certain time at which this species of Carp assumes its golden and red colours. It varies according to the fish's constitution and rate of growth.

POULTRY MARKET.—OCTOBER 23.

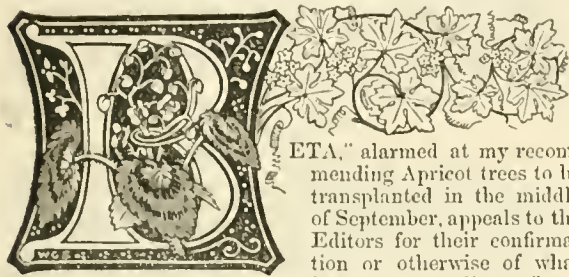
SMALL things resemble larger ones, and as gloom seems to be the characteristic of all markets, so ours is no exception. There is a meagre supply and no trade.

WEEKLY CALENDAR.

Day of Month	Day of Week.	OCT. 31—NOV. 6, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.					
			Day.	Night.	Mean	Days.	m.	h.	m.	h.	m.	h.	Days.	m.	s.			
31	Th	ALL SAINTS. Royal Horticultural Society, Promenade. 20 SUNDAY AFTER TRINITY.	53.7	37.8	45.7	21	53	af 6	35	af 4	31	af 10	4	16	15	804		
1	F		54.0	37.8	45.9	23	55	6	33	4	22	11	12	8	16	17	805	
2	S		54.3	37.4	45.8	18	57	6	31	4	after.	4	9	6	16	18	806	
3	SUN	Royal Horticultural Society, Fruit and [Floral Committee Meeting.	53.4	35.8	44.6	18	58	6	29	4	41	0	1	10	7	16	19	807
4	M		51.9	36.5	44.2	20	0	7	27	4	18	1	11	9	16	18	808	
5	Tu		52.9	37.7	45.3	20	2	7	25	4	48	1	morn.	9	16	17	809	
6	W		52.6	37.5	45.1	19	4	7	24	4	16	2	5	0	10	16	15	810

From observations taken near London during the last forty years, the average day temperature of the week is 53.3°; and its night temperature 37.1°. The greatest heat was 61°, on the 2nd, 1857; and the lowest cold 19°, on the 3rd, 1861. The greatest fall of rain was 0.82 inch.

TRANSPLANTING FRUIT TREES.



BETA," alarmed at my recommending Apricot trees to be transplanted in the middle of September, appeals to the Editors for their confirmation or otherwise of what he terms my "dictum."

Having no experience to record, he wisely refrains from making any remarks on the propriety or impropriety of transplanting Apricots in the middle of September. His experience is with Apple trees—the last of fruit trees to blossom, to leaf, and of the latest to lose the foliage. There is no analogy between the Apple tree and the Apricot, the latter being the first to blossom and leaf, and it is not the last, but among the first, to lose its foliage in autumn.

I do not consider the Editors' reply to "BETA" is otherwise than a confirmation of my remarks, for they say, "Trees which ripen their wood early may be planted early with propriety." Is not the Apricot one of this description? Mr. Thompson, in his excellent work "The Gardeners' Assistant," page 536, says, "Planting may be performed in the end of September;" and so thoroughly convinced am I of the desirability and soundness of the early planting of Apricot trees, that I have again this year transplanted some on the 20th of September, and I find they are making good progress at the root, and will be in fine condition for a vigorous growth next spring. I tried the transplanting of Apricot trees in the middle of September in 1866, 1865, and 1864, and have not lost a tree or even twig, nor fruit, for trees could not well bear better crops. I admit that planting in September is not to be performed in the same manner as that in the end of October or November; but if done carefully, I hold that the Apricot is as safely moved in September as it is later, whilst the prospects of fruit and a more vigorous growth attend early rather than late planting. For an Apricot to fruit and make a vigorous growth in the following year it should be planted as early in the autumn as the state of the weather and condition of the trees warrant. Transplanting requires care and judgment. Trees in the open ground in nurseries are not fit for being planted so soon as trees that are grown against a wall, for their growth is later, and their wood not nearly so well ripened. Mr. Rivers advises Apricot trees to be potted in October; he has discontinued the practice of removing the surface soil in autumn for the purpose of top-dressing. He finds it better to do it when the trees have leaves. Autumn top-dressing, he says, is quite unnecessary. I wish that he would go a step further, and tell us that in any way disturbing the roots of a tree when it has ceased growth and is at rest is not only unnecessary but injurious. The late planting of fruit trees,

and of Apricots especially, I have proved bad. Judging from what occurs in my own neighbourhood, they do not root in winter after the fall of the leaf, if planting has been deferred until that time; for Apricot trees I planted in November have no rootlets formed when I take them up for examination early in February, but they have many if planted at the close of September, if they are examined in November. The trees I took up and replanted on the 30th of September have as healthy a look as those that were not moved, their foliage dying off with a better colour. I like to see the leaves of trees assume their full autumn tint before they fall; it is a sure sign the wood is ripe, but when the leaves fall green it is a sure indication of late growth, and immature wood.

As to planting Apricot trees in November, I find they do not succeed so well as trees planted early in March, and they do quite as well planted in April as when planted in November and during the months intervening between it and March. I have planted Apricot trees in September, October, November, December, February, March, April, and May, or during eight months out of the twelve, and the trees that have done the best the following year were those planted in September, but all have grown well.

Whilst I would in all cases prefer September planting for the Apricot when the trees are on the ground, I am ready to grant that it would not be safe to take up trees from the open ground in nurseries, and expose the roots to air as they are after the leaves have fallen. September will not do for this wholesale mode of planting. The trees must be lifted carefully, their fibrous roots must be kept from the sun and air, and their foliage screened from the sun after the trees are planted. If this care cannot be afforded at planting, then no one should think of planting until most of the leaves have fallen, and after this the earlier it is done in autumn the better. Apricot planting should cease by the second week in November; the trees will do better planted in March than late in November, December, January, or February.

Having, by recommending Apricots to be planted during the middle of September, wholly contradicted "BETA's" "old-fashioned notions," I am almost afraid to venture a response to your call, "We shall be glad to see the opinions of others," fearing lest I should still further confirm him in his "old-fashioned notions" by stating how successful I have been in the early moving of Apple trees, which with him do very indifferently planted in October—one dies outright, the second fails to set a fruit, the third sets one fruit half-starved and good for nothing. What would "BETA" think if he saw any one lifting Apple and Pear trees on a very hot day during the early part of July? This I did in 1866; Apple bushes and pyramids on the Paradise stock, and Pear pyramids were moved in July. They were moved a distance of 100 yards, received each a watering-potful of water, and had a mat placed before them on the south side from 8 A.M. to 6 P.M. A good watering overhead was given every day in the evening. Neither Apple nor Pear trees lost a leaf, and now they are fine trees.

I had no idea how easy it was to plant Apples on the

Paradise and Pears on the Quince in the hottest days of summer, and should never, perhaps, have known had not the knowledge been forced upon me. The ground they occupied was required for building-purposes; moved the trees must be, or be cut up, and I was loth to part from them, for the more I see of Apples on the Paradise and Pears on the Quince stock, the more I like them. It has proved a point gained; for, having some unfruitful trees, the idea occurred to me to lift them at once, and not wait until November. What! move or lift Apple and Pear trees in July? Yes; lift them in July. Not a leaf fell; the check was salutary, they formed bloom buds plentifully, have fruited, and are now bristling with spurs, not sharp-pointed like a needle, but round and plump at the end.

Again: this year early in August I had to remove some Pear trees on the Quince stock, or cover them under stones weighing from a ton to upwards of ten tons each, used in the construction of a rockery arch. They were, of course, removed, and I defy a stranger to distinguish them from others that were planted last November.

Because it is practicable (as I think the above facts prove), to plant fruit trees in July, it does not follow that that is the best time for performing the operation. I, for one, should not think of planting fruit trees from a nursery in quantity until the leaves had commenced to fall. That is the proper time to plant. The trees will endure greater hardships, be least susceptible to the exposure of the roots to the air, and the amount of evaporation from them will be at a minimum. Less care is required, the labour and expense are not so great; but in the planting of choice fruit trees I think a little care bestowed upon the protection of the fibres from the destructive influences of dry air, and in sprinkling the foliage with water—ever better than heavy soil waterings—to keep it fresh, with a slight shade for a few days after planting, and careful watering, will be amply repaid by the certainty of the trees making fresh rootlets immediately. Such none but trees planted early, or those not moved, can have; for those moved after the leaves fall remain just as they were planted until the return of warm weather, in consequence of which the buds swell and roots are protruded in quest of nutriment for their support. A tree planted early, before or when the leaves are falling, generally, and with me always, sends out fresh roots at once; it becomes well rooted before cold weather, and it is in a condition to supply food to the blossom, the fruit, shoots, and leaves when they are called into activity by warm genial weather. Early planting, as “EXCELSIOR” justly remarks, is a clear gain of a year over late planting, and a more vigorous growth follows—a point of no small importance in the planting of young trees. I want a tree with shoots that require training the year after planting, and not stunted shoots that we may wish to grow, but which will not do so until they are cut into the quick, and something like a balance of root and head secured. I have not the wish to cut in a fine tree at planting to little more than a stump in order to obtain a growth, often no better in one year than the tree had when it came from the nursery, and unless it is cut in hard (late planting being practised), the growth for the next year is miserably small.

The present being the general time of planting fruit trees, I will offer a few hints to intending planters.

1st, Select trees that are not luxuriant, but moderately vigorous in growth. In nine cases out of ten they will lift with a quantity of fibres, it being difficult to shake the soil from them. Trees of strong growth have strong, thick, fibreless roots; they require time after planting to form fibres. The moderately vigorous have plenty of fibres; they will make a good start in spring, and the least possible time is lost.

2nd, Plant the trees as soon as possible, keeping their roots as much as you can from the atmosphere, which dries them and destroys their most important roots—the fibres—if long exposed to its influence.

3rd, Let the soil be in good order, not wet and sticking to the feet of the planter, but so that there is no clogging of the spade, no puddling of the feet in mud.

4th, Make the hole large enough to hold the roots when spread out straight and evenly, putting some good rich soil under, over, and about the roots.

5th, Plant on a cone, if the ground is heavy and wet naturally, and in all cases it is well to keep the trees high; shallow planting is better than deep.

6th, Cut well in any thick long roots, they being for the most part destitute of fibres, and especially any such roots having a downward tendency. Any roots rendered ragged at

the ends by breaking or cutting with the spade should be made smooth by cutting with a sharp knife.

7th, Give a gentle watering at planting, so as to settle the earth about the roots.

8th, Mulch the ground from the stem outwards as far as the roots extend, with short littery manure 2 or 3 inches thick.

9th, Do not apply manure to the soil at the time of planting; it is best given at the surface, and when well reduced in the form of compost.

10th, At planting, tie or fasten the trees to stakes to prevent their being blown and knocked about by wind.

11th, If the trees are required to make a vigorous growth cut them well back early in November, the leaves having fallen; and if the trees had little but thick long roots, the head must be reduced in proportion to the amount of fibrous roots.

12th, If fruit is wanted and not growth, the less a tree is pruned in winter the better it will be of being planted in autumn.

13th, Give occasional waterings after planting during dry periods in spring and early in summer, but avoid heavy and constant waterings; they only tend to render the soil cold and hinder the tree's growth at the root. Sprinkling overhead is better.—G. ABBEY.

SELECTION OF BEDDING PELARGONIUMS.

As you have frequent inquiries respecting the best bedding Pelargoniums, and as I have paid greater attention to this class of plants than to any other, I venture to send you the results of my observations. I should premise that all the sorts I mention have been tried either in whole beds, or in clumps of three in a mixed border, and have nearly all stood the test of at least two seasons. Those that I have only had this year I do not include in my list, though I may mention Merrimac (Lemoine), very like Lucius; Waltham Seedling, very like Black Dwarf; and Comte de Morny as very promising. I have added the letter t or h, the former signifying tender and apt to damp off in the winter, and the latter hardy and not so liable. The letters r and p signify that the variety will bloom freely in tolerably rich soil, or requires a poor soil, a point of no small importance, though, perhaps, to the amateur with inferior appliances for keeping his plants through the winter, of less consequence than the question of hardiness.

Here let me remark, that such amateurs owe a deep debt of gratitude to the late Mr. Beaton for introducing the Nosegay varieties, which are immeasurably hardier than the old Zonal kinds. It is no exaggeration to say, that for one autumn cutting of Stella or Cybister that I lose, ten die of such kinds as Commander-in-Chief, Tom Thumb, and Trentham Rose. I may mention that I have restricted the Nosegay class in the following list to those with the characteristic long loose petals. The Hybrid Nosegays, like Black Dwarf, are included with the Zonals.

The varieties are placed in what I consider the order of merit. Those to which an asterisk (*) is prefixed, are what I should recommend to purchasers, the others are unnecessary.

NOSEGAYS.

Scarlet.

- | | | |
|-----------------------------|--------|---------------------------------|
| *Stella, dark, h. r. | } tall | *Monitor, light, h. r., dwarf. |
| *Cybister, light, h. p. | | Spread Eagle, light, h. r., do. |
| Orange Nosegay, do., h. p.) | | |

Crimson.

- | | | |
|--------------------------------|--|------------------------------|
| *Lord Palmerston, rosy, h. r. | \| | Beaton's Pet, magenta, h. p. |
| Merrimac (Carter), dark, t. r. | | |

Cerise.

- | | | |
|---------------------|--|--------------------|
| Miss Parfitt, h. r. | \| | Mrs. Vernon, h. p. |
|---------------------|--|--------------------|

Pink.

- | | | |
|--------------------|--|----------------|
| Lady Cullum, t. r. | \| | Premier, h. p. |
|--------------------|--|----------------|

It is difficult to decide on the comparative merits of Stella and Cybister, but they are of such different tints of scarlet that everybody should have both, and plant Cybister in the poorest and driest situation in his garden, while Stella may be planted anywhere. Monitor is an exceedingly good dwarf variety, with large flowers and broad petals, of a very light orange scarlet. It is of the same colour as Orange Nosegay, but superior in every respect except hardiness. Spread Eagle is very small in truss. Lord Palmerston is the most effective rosy-crimson bedder, and, indeed, one of the finest bedders of any colour I know, but the long loose petals get sadly mauled by wind and

rain if it is much exposed, and the weather is stormy. *Merrimae* (Carter), is of a pretty colour without the rosy tint of *Lord Palmerston*, but its truss is small, and it is a very slow grower. *Beaton's Pet* I call a magenta crimson, but it has the upper petals scarlet. The colour is pretty, and the truss large, but it is uncertain as a bloomer. *Miss Parfitt* is quite superseded by *Amy Hogg*, which is of the same colour; and *Mrs. Vernon* grows 3 feet high in the poorest soil. *Lady Cullum* and *Premier* are not worth cultivating, though the colour of the latter when it does bloom is pretty.

ZONALS.

Scarlet.

TALL.

- | | | |
|-------------------------|-------------------|-----------|
| *Victor Emmanuel, t. r. | Eclipse, t. p. | } Trellis |
| Vivid, p. | Scarletina. | |
| *Cottage Maid, t. p. | Pillar of Beauty. | |
| Spitfire, h. p. | | |

MEDIUM.

- | | |
|-------------------------------|-----------------|
| *Rubens Improved, h. p. | *Eleanor, t. p. |
| *Commander-in-Chief, v. t. r. | |

DWARF.

- | | |
|--------------------------------|------------------|
| *Crystal Palace Scarlet, t. r. | Tom Thumb, t. r. |
|--------------------------------|------------------|

Crimson.

- *Black Dwarf, h. r.

Salmon.

- | | |
|---------------------|----------------------|
| *Lucius, h. p. | Indian Yellow, h. p. |
| Woodwardiana, h. p. | |

Rose.

- | | |
|--|------------------------------|
| *Duchess, h. r. | *Trentham Rose, t. p. |
| Rose of England (? Cerise Unique), t. r. | Princess Lichtenstein, h. p. |
| | Gem of Roses, h. p. |

Rosy Pink.

- | | |
|------------------------------------|----------------------------------|
| Helen Lindsay, t., very poor soil. | Mrs. Whitty, t., very poor soil. |
|------------------------------------|----------------------------------|

Cerise.

- *Amy Hogg, h. r.

Pink.

- | | |
|-------------------------|----------------------|
| *Brookfield Pink, t. p. | *Mrs. W. Paul, h. p. |
| *Christine, t. p. | Eve, h. p. |

White.

- | | |
|------------------------|-----------------|
| *Madame Vaucher, t. p. | Snowball, t. p. |
|------------------------|-----------------|

Of the Scarlet Zonals that I have tried, I consider *Victor Emmanuel* as by far the finest. Its truss is enormous and of the most dazzling scarlet. Were it not for the comparative difficulty of keeping it through the winter it would be superior to any of the Nosegays, as the flowers are remarkably well shaped. *Vivid* is of the same class, but decidedly inferior. *Cottage Maid* is only worth growing for its dark-zoned leaves. The three medium-sized Scarlet kinds are all good, and so different that each deserves to be grown. *Rubens Improved* is a very free-bloomer, of a peculiar colour, being rather a pure light red than a scarlet. I had a bed of it (the plants plunged in five-inch pots), that was extremely brilliant the whole summer. *Commander-in-Chief*, which I have under the name of *Kingsburyana*, is a well-known and excellent old sort of particularly good habit and pretty leaf, but it is very tender. *Eleanor* has a plain dark green leaf, which sets off the flowers admirably. *Crystal Palace Scarlet* is very like *Tom Thumb*, but superior in size of truss.

The only Crimson variety I have fairly tried is *Black Dwarf*, which is magnificent. Its habit is first-rate, and there is a depth and richness in the colour of its blooms which make it one of the very finest *Pelargoniums* I have ever seen.

Lucius is a very free bloomer with enormous trusses of fairly large flowers, an excellent bedder, which neither of the other two *Salmon* varieties is.

Duchess is another first-class bedder with very large trusses and a fine dark-zoned leaf. *Trentham Rose* is too well known to require description, but, old as it is, I do not know its equal as an effective bedder where the soil is not too rich. The soft green of the leaf sets off the flowers to perfection. The *Pelargonium* I have under the name of *Rose of England*, I believe to be the old *Cerise Unique*. It is a very free-bloomer, with numerous small trusses of well-formed flowers, has a good compact habit, and a leaf and white stalk like *Commander-in-Chief*.

I can see no difference between *Helen Lindsay* and *Mrs. Whitty*, and can make nothing of either of them. The flowers are undoubtedly beautiful when there are any, but a soil composed of anything richer than brickbats and lime rubbish causes the plants to produce nothing but leaves.

Amy Hogg is another magnificent variety, with an immense truss, and very free blooming.

Brookfield Pink is a sport from *Trentham Rose* that occurred in my garden. Its flowers are of a very pure pink, paler than *Christine* and larger; the trusses are also considerably larger—in fact, it is a very pale *Trentham Rose*. *Mrs. W. Paul* is very handsome, the flowers, which are of a very pale pink, being well set off by the dark leaves. The habit is also good, but it is rather a shy bloomer in rich soils. *Eve* is very like it, but inferior.

There is no perceptible difference between *Madame Vaucher* and *Snowball*, they do best when shaded from the sun by a tree.

I have said nothing of the Variegated *Pelargoniums*, as I am not well up in them. *Flower of Spring* (white edged); *Cloth of Gold* (yellow); *Mrs. Mitford* (yellow); and *Mrs. Pollock*, are all good in their way. Let me add a word of advice to those who have but indifferent appliances for keeping their plants through the winter. Never strike your cuttings of Variegated *Pelargoniums* in the autumn. Lift and pot some old plants strike cuttings in the spring as late as you like, and plant them in your kitchen garden. Let them grow till August and then pot them, when you will have an excellent lot of well-established little plant that will not damp-off in the winter.—A. O. W.

WINTERING ORCHARD-HOUSE TREES IN THE OPEN AIR—VINES IN POTS.

In your *Journal* of October 17th Mr. Rivers notices a short article of mine on orchard-house culture in a kindly spirit; he, however, protests against wintering Peach and Nectarine trees in the open air. All I can say is that I have seen them treated in that way without injury to the crop of fruit or the constitution of the trees, even during such a winter as the last, the crop of fruit this season being better than it was in 1866.

Now, I reason in this way. If my neighbour, by keeping his trees, with the pots plunged deeply in cocoa-nut fibre refuse, in the open air from October until February, obtains as much fruit and of as good quality, his practice must be as good as mine; and there is this gain from it, the house can be kept gay with flowering plants during the duldest and dreariest months in the year. It is for this reason that I have placed the trees outside this year, and the house is now heated. I have filled it with *Chrysanthemums* and other autumn-flowering plants, so that it will answer the purpose of a conservatory in winter and an orchard-house in summer. If I find that it does not answer to treat the trees in this way, I will not fail to inform Mr. Rivers through the medium of your *Journal*.

It is when the flower-buds are expanding that fruit trees are injured by frost in this country; it is very seldom severe enough to injure them during the winter months. I would rather be guided by experience gained in this country than by reading about the injury to trees from frosts in America, where the cold is sometimes intense, especially in the northern states and Canada.

If those of your correspondents who have kept their orchard-house trees in the open air during winter would give their opinion of the practice, it would be the best way to come to a definite result. I do not know the reason why my trees require so much water. It may be the soil, which is of a rather sandy nature, and I use this soil with a large proportion of fibre in it. I have, on the recommendation of Mr. Rivers, used chalk in some instances, but I did not perceive any difference in either the size or quality of the fruit.

I may repeat what I have said about the size of the pots. The sizes which I shall discontinue using are Nos. 1 and 2—that is, 21 and 18-inch pots, inside measure. The sizes which I consider the best are Nos. 4, 6, and 8—being in diameter 14½, 13, and 11 inches, inside measure. This season I have turned a number of trees out of 13-inch pots, reduced the ball of earth, and repotted in 14½-inch. This was done as soon as the fruit was gathered, so that the trees had time to establish themselves in the house before they were turned out into the open air.

As to the Vines on which I had bunches which weighed about 2 lbs., I raised the plants myself from eyes in the spring of 1865. They were struck in 60-sized pots, then shifted

into 32's, or 6-inch pots, then into 8-inch, and lastly into 11-inch pots, during the same season. The canes were very strong, and would have borne six or eight bunches each in 1866, but were allowed to bear only three or four bunches. They were twisted round the pillars which support the roof of the orchard-house. As soon as the fruit was ripe I repotted the Vines in 13-inch pots, using the same compost—namely, a mixture of turfy loam, horse-droppings, and a few crushed bones. In the present season they had each from five to eight bunches, which were well coloured, especially those of the Trentham Black, which has always coloured with me better than the Black Hamburg.

When I stated the weight of the bunches, I also ought to have mentioned the number of them and the age of the Vines. Each cane showed, perhaps, from twenty to thirty bunches, and would have borne from ten to fifteen, but at the risk of losing the crop of fruit next year. I prefer a few good sized bunches, with large berries at the same time, rather than a large number of bunches on which the berries will never swell to their full size, nor will the Vine carry a crop the following year. The young wood on these pot Vines is as strong as that in the vineries, where the Vines are planted in a prepared border.

I was tempted yesterday, on seeing in the Journal the weight of the Jersey Chaumontels, which were grown in the grounds of Mr. G. H. Norman, of Jersey, to weigh two General Todtleben Pears, which I grew in the orchard-house in an 11-inch pot. The weight of one was 18 ozs., and that of the other 14 ozs. It is a fine-flavoured dessert Pear, and is nearly ripe.

—JAMES DOUGLAS.

MANAGEMENT OF HARDY CONIFERÆ.

The latest introductions among hardy coniferous plants command a ready sale at extravagantly high prizes, perhaps more so than any other class of out-door plants. This, to a certain extent, is a proof of the popularity of this interesting tribe of plants, while their adaptability to our somewhat precarious climate is now scarcely doubted. At many noblemen's and gentlemen's places throughout the country fine collections and numerous stately specimens are to be met with; but, on the other hand, there are also to be seen at not a few places trees exhibiting a leggy and unsymmetrical appearance that might have been handsome and noble-looking specimens. To inquire into the cause of this is the only object of my making the following remarks.

The question may be asked here, Whether the present style or arrangement in the planting of coniferous plants to any extent differs from that which was practised twenty or thirty years ago, when individual collections were more limited, and the hardiness of many of the kinds was much doubted. Where ground is limited, and if the collections are from time to time being added to, there is certainly no remedy for the close-planting or grouping-system; but if, on the contrary, space is no object, why persist in planting trees, even in this country, within 20 or 30 feet of each other, that are known to attain the enormous height of from 300 feet and downwards in their native countries? Of course anything approaching the above-mentioned height from these trees is not reasonably expected in this country; nevertheless a sufficient space, which in nine cases out of ten is denied many of our most graceful trees, ought to be allowed, that they may not become one-sided, toppling-looking objects, but handsome and perfect trees.

A respected writer in a contemporary lately gave some excellent advice on the stem and branch-pruning of certain coniferous trees and shrubs. Such advice must be welcomed by those who find their choice Cedars of Lebanon, Deodars, &c., clasping each other in fond embrace, denying for the future a free passage between. The pruning of many of the cone-bearing trees has long been considered a rather dangerous operation, and I believe it to be so still, unless practised by very experienced hands. However, it is my opinion that if more space were allowed, as already stated, there would rarely be any necessity for either stem or branch-pruning. Not long since I had the pleasure of visiting a nobleman's place where a clever writer on horticulture presides. Here I observed several trees—what I took for Cedrus deodara—I should think, upwards of 40 feet high, and they were somewhere about 30 feet apart. These trees are planted in a straight line, and form part of a gigantic hedge to all appearance. In another part of the grounds a number of Wellingtonias had been recently planted;

these are planted also in a line, behind a ribbon-border; the distance apart is not more than 30 feet, and I think not that from the line of plants to the edge of the path. The object of the planter in this case might have been protection to the bedding plants; however, be that as it may, it is certainly not an example for intending planters of this tree to follow.—W. H. C.

CULTURE OF PLANTS FOR SPRING FLOWER GARDENING.

WHEREVER this branch of gardening is carried out to any extent, I would recommend the selection of a piece of ground to be devoted solely to the culture and propagation of stock, and to have a reserve garden in case of need. This is not absolutely necessary, for most of the plants will do in any border, or behind a hedge in any part of the garden, so as to afford shade if wanted; but it is much better to have the plants all together when attending to them. Common garden soil I find suitable for most; however, this sort of soil is easily altered to suit any particular plant.

I will now direct the reader's attention to the flower garden in the month of May. About a week before the removal of the plants, and if the ground should not be thoroughly wet with recent rain, all the evergreens must be watered, and each of them cut round to the depth of the spade, pressing the soil to the plant. This operation makes the soil adhere to the roots, and the plants are moved with good balls to the ground, and planted in their summer quarters, receiving shade and water for a time. If this operation is done carefully, they only suffer a very slight check, from which they soon recover. The same precaution is necessary when they are transferred to the flower garden in autumn, and they should be pruned into shape if required.

Wallflowers next claim consideration, as the garden would lose effect without them, and one can scarcely have too many, as they are among the earliest to bloom, and they fill the air with their delightful perfume. They grow in common garden soil, and move well at any time. The double varieties require a richer soil than the single. Cuttings put in in the beginning of May make fine plants by autumn, but the single varieties can be raised by hundreds if seed be sown in April, and the seedlings transplanted when large enough, keeping them pinched as required.

Allyssum saxatile compactum is a pretty, dwarf, yellow-flowered perennial. A bed of this plant, edged with a blue Crocus, has a very pretty effect. It moves well, and grows in common soil in any corner. It is propagated by cuttings immediately after removal.

Iberis sempervirens (Candytuft).—The treatment is exactly the same as for the preceding. It is a dwarf, white-flowered plant, very free, blooming through April and May. When propagated by cuttings these must be put in early. I generally take off the cuttings in March, and insert them in finely-sifted soil with a little sand added, on a shady border. They are transplanted when struck, and kept pinched until August.

Myosotis, or Forget-me-not, is so well known that description is unnecessary. I may, however, remark that two-year-old plants bloom much earlier than the current year's seedlings, and last longer in bloom.

Viola cornuta is useful for summer as well as spring decoration. It has been in bloom with me since last April. I contrive to plant it where it is to remain. It may, however, be divided and planted at any time, or propagated by cuttings or seeds; the first two modes are to be preferred.

Pansies.—Of these I have only the Cliveden Purple and Blue; I find them very free blooming and early, and they need rather a rich soil to grow in. They require planting rather deeply, and pegging down, or the wind blows the shoots off close to the ground. They are propagated by division or cuttings; in either way they will do better with coarse sand or road-drift added to the soil. Care must be taken to protect them from the ravages of mice and snails.

Daisies.—The red and white are the strongest growers with me, and are nearly always in bloom. They are very effective as edgings or lines if planted thickly. They are easily increased by division, as the smallest piece will grow if shaded from the midday sun. The mice are troublesome where Daisies are.

Polyanthus.—Of this I grow the mixed varieties, which are in bloom as early as a Crocus. They like a rich soil to grow in,

and a poor one to bloom in. They are propagated by offsets immediately after removal, but must not receive any sun.

Aubrietia deltoidea.—This is one of the prettiest little spring-flowering plants I know; it does well in common garden soil, and is increased by division. A bed of this plant edged with white Daisy, is very pretty indeed. It does not exceed 6 inches in height.

Arabis lucida variegata, and *A. albida*, are the only varieties I have in use, the former has a very pretty effect as an edging next the grass, and the latter is one of the earliest blooming plants we have; its white flowers around the dark foliage of the evergreens is very pretty.

Annals.—Those named in my list of last week I generally sow broadcast in common soil in the beginning of August, and transplant into the beds in October or November. If any failures occur, I sow again in pots in January, place them in gentle heat, and when the young plants are of sufficient size I harden them off gradually, and plant out in February. In this way they do quite as well as when sown in August. They seed freely, and if care is taken enough seed may be saved to last for some time, excepting in the case of *Collinsia verna*; of this the current year's seed must be sown, older seed will not vegetate.

Bulbs.—Those I use are the cheap or bedding kinds bought by the hundred, in mixed or distinct colours; the single ones are the best of both Hyacinths and Tulips, and when planted I place a handful of sand around each bulb. Precautions must be taken against mice, which are very fond of them.—THOMAS RECORD, *Hawkhurst*.

ORCHARD-HOUSE MANAGEMENT.

MR. RIVERS finds my short paper, page 257, amusing—in what respect I am at a loss to know, unless that I own to have been mistaken, and he appears to be fast coming to the same conclusion with regard to his own practice. I hope I shall never be too old to learn, or unwilling to admit my mistakes.

I think that I cannot be wrong in contending against destroying the surface roots of a Peach, for the sake of changing a small portion of the soil in which it is growing. If it be true that by covering with manure the soil in which a potted Peach is growing during summer, it is less inclined to grow through the bottom of the pot, but, on the contrary, roots are produced where the food is supplied—that is, on the surface, may we not conclude that the surface roots are the more valuable, and ought to be preserved? I do not see the force of the illustration (if it be one), of the field ploughed 6 or 3 inches deep, nor what connection it has with the so-called top-dressing of trees in pots. It might, perhaps, bear some resemblance to the proposed plan of using pots of less depth, if the corn were drilled at wider intervals.

Mr. Rivers also contends for the term "top dressing," when the operation consists in removing several inches of soil, to be replaced by fresh. The term is borrowed from agriculture. What does a farmer mean by it? Is it not manure spread or cast upon the surface? We ought never to be too old to speak correctly, and to show how necessary it is that such terms should have a definite meaning, I will relate an anecdote.

One day I met a gentleman very fond of his orchard-house, who said, "Well, Mr. Pearson, I have a capital crop this year, but, as I think my gardener does not understand much about their management, I want you to tell me how you are now treating your plants."

I replied that they had just been top-dressed with horse manure and malt dust.

The next time I met him, he said, "A pretty mess you have made for me, my gardener top-dressed the plants according to your directions. They have dropped nearly all their fruit, some have lost their leaves, and I have no doubt will die."

Judge of my surprise, when I found a quantity of soil had been removed, and the manure placed in contact with the uncovered roots. "If you were," I asked, "told to top-dress your meadow with bones or guano, would you remove the turf?" "Of course not." "Then how was it to be supposed you would remove the surface soil in your pots?" "Does not Mr. Rivers, the inventor of orchard-houses, call that top-dressing?"

What reply can be made to that question, except that I ought to have remembered that he had changed the meaning of the phrase, and carefully distinguished between "surface dressing," and top-dressing?

Well, I must try and remember in future, that by "top" is not intended the upper surface.

In answer to Mr. Douglas, I may say I have fruited all the Peaches he mentions, and many more, and am only surprised he can compare any of them with *Noblesse* or *Grosse Mignonne*, or even with *French Galande*. Early York is with me the best very early variety, but in flavour never first-rate. Royal George is hardly ever equal to *French Galande*, and much more subject to mildew. Princess of Wales, Walburton Admirable, Téton de Venus, are very valuable late kinds, but never here equal or nearly equal to *Noblesse* or to *Grosse Mignonne*. They come in after these two are over, and are indispensable to a good collection.

Mr. Douglas's soil must be very light for his plants to require watering three times a day; his climate is, perhaps, much warmer, his treatment is certainly very different, and so his experience differs, as is natural. If my plants were turned out in summer, they would be red enough, but not ripe. If left out during winter, I should not expect them to retain their buds, and if we had a cold winter, I should expect some to be killed outright. If I found Peaches flagging at 11 o'clock A.M., I should think they might have been sprinkled at eight, but certainly not watered. With trees flagging after being watered three times in a day, I should be surprised if Mr. Douglas's experience in the flavour of fruits, did not differ much from mine. If his soil is not very peculiar, he must "surface" dress, not "top" or bottom dress with water.—J. R. PEARSON, *Chilwell*.

ROSE CULTURE.

HAVING grown Roses on the Manetti stock for the last eleven years, and considering it as, perhaps, the best stock known, I have been greatly interested by Mr. Radclyffe's recent papers in the Journal. The pruning recommended by him is, however, rather new to me—viz., to leave comparatively few shoots, and to leave those long; in other words, to do little more than top them. Would not this make the plants "leggy," and allow the bare stems to be visible? In my light sandy soil I have found hard pruning the best; possibly his fine soil and excellent culture might make such pruning permissible, but it may be open to doubt whether for average soils it would be the best method.

I have a Rose border or bank with about one hundred plants planted 2 feet apart, and very well they have flourished; but I see Mr. Radclyffe recommends 3 feet apart every way, would it be desirable to shift them to 2½ feet?

This year, for the first time, I have followed Mr. Rivers's advice as to how to promote autumnal blooming—viz., if a Rose tree throws up twelve shoots with blossom buds, to cut away half the shoots to the third or fourth eye. This I have done with all my Roses, besides those in the border mentioned; the result has been quite satisfactory, and I shall not fail to pursue the same system again. My plants have been continuously in flower from the end of May to the present time.—RICHARD POWLE, *Ross*.

[If the Roses do well in the sandy soil at 2 feet apart and with hard pruning, I should not alter the system. I am obliged at Okeford Fitzpaine to put plants closer than I prefer. They like a free circulation of air between them. I do not find my plants "leggy," but bushy.—W. F. RADCLYFFE.]

NEW LOBELIA LITTLE GEM.

By far the best Lobelia that I have seen is Little Gem, a seedling from Paxtonii, raised by Mr. Bowie, gardener to the Earl of Tankerville, Chillingham Castle. The flowers are somewhat in the style of those of its parent, but with a larger white blotch in the centre, and a better-defined blue margin. In its robust, compact, dense, free-flowering, upright, dwarf habit, it is infinitely superior to anything hitherto seen among Lobelias; moreover, it has gained the highest award the Floral Committee of the Royal Horticultural Society could bestow upon it—viz., a first-class certificate. As a proof of its enduring qualities I may mention that the plants exhibited at South Kensington on the 15th of October were lifted from the flower garden, potted five days prior to that date, sent to London, a distance of more than three hundred miles, and were yet in such a condition as to meet the approval of the Committee. The stock is still in the hands of Mr. Bowie; whoever shall be successful in securing it for distribution will be fortunate.

indeed, as the more it is seen, the more popular it will become, not like some of its predecessors, and the much-lauded *Viola cornuta*, which require only to be grown one year in order to determine whether they are fit subjects in the flower garden to be depended upon for a continuance of bloom throughout the season.—JOSEPH OLIVER, *Eslington Park Gardens*.

VINES AND VINE BORDERS—NATURAL TEMPERATURES.

THE first of these titles was the one under which this discussion began, and the last was added by you, I believe, to my letter published in the number of May 23rd. I do not bring this forward that I may claim to be the first who turned the discussion upon natural temperatures, as it was seeing that "H. S." treated the subject in this way that induced me to join; but I do claim it as one which I have taken great pains to draw attention to in your Journal.

I years since drew attention to the enormous quantity of piping Mr. Thomson advises, and I think that his temperatures are excessive if they are, as I understand them to be, temperatures in the shade—that is, indicated by a thermometer hanging under the Vines. I hoped Mr. Thomson would reply, but I also wished to know all "H. S." had to say, and to induce this I took a position to some extent in opposition to him. I was not writing a treatise, and was not, therefore, bound to give my opinion; at the same time, I think that any one who reads that letter of May 23rd will come to the conclusion that it was an invitation to discussion rather than an expression of opinion.

When I have advocated such high temperatures as 100°, I have always said that they should be from the sun acting upon the whole house, as in the case of an orchard-house or vineries such as mine are, and which are pretty well described by "VIATOR" at page 291, when he says, "The Vines should be trained upright," "thus leaving a clear roof." The difference between 100° as I practise and 100° as Mr. Thomson advises is—I have not a comparison, and can only say I still at certain times advocate one and avoid the other; and as "H. S." says he wants to know if he is right in growing his Grapes at such temperatures as he speaks of, I will tell him where and how he can obtain a confirmation of his practice, and he can at the same time help me in supplying what I think is a great want. "H. S." is trying to make Mr. Thomson prove the temperatures he advises by his own practice. This I think he has a right to do [He did reply last week.—Eps.]; and I made the same effort in your pages in respect to a work on orchard-houses. In my case the only result, as far as I know, was that this work, which then appeared annually in a new edition, is no longer advertised; and I must therefore conclude the author would rather cease publishing than tell what temperatures success requires.

It is very desirable to have the maxima and minima temperatures of a south wall and of the large conservatory at Chiswick, and I applied for them. I have only one year of these temperatures, but may in due course receive this year's any day. There Vines of all sorts are planted inside and out, but none both inside and out. There, also, will be seen the great advantage of planting only inside even where the Vines enjoy the highest temperature in all England; and I should think the weight of Grapes they have produced year after year in a border which for size and depth Mr. Wills would laugh to scorn, might also be ascertained. I expected to have been able to furnish from one of my houses similar tables, which I directed to be kept, and was greatly disappointed to find that my gardener, for his own reasons, had discontinued observing; but I will try and arrange better this year. I am also intending to blacken a portion of a south wall, and take the maximum and minimum each day, as also with a black bulb thermometer exposed to the sun, which thermometer I will have sheeted up each night.—G. H.

YOUR correspondent "H. S." seems to infer by his question in the first paragraph of his communication, that no Vines exist in vineries to which an ass could be tied with safety. I wish to tell him that, as a disciple of Mr. Thomson, I could show him Vines planted only four years since, to which he could not only bind the colt but the ass as well, and the rearing, kicking, or any frolics they chose to make would have no effect whatever on these cable-rooted "climbing plants of the

temperate zone." These same Vines are luxuriating, forty-five in number, in iron vineries 200 feet long, and are carrying upwards of 1500 lbs. weight of fruit, two-thirds of which are Muscats and Lady Downe's. These houses have air-openings equal to one-fourth part of their surface, yet the thermometer frequently in the month of August last indicated 45° Centigrade, or 110° Fah. under the shade of the Vines.

Although living within three hundred miles of the British Isles, amongst Vines and vineyards, I still adhere to the principles inculcated in Mr. Thomson's admirable treatise on the Vine, believing that by so doing we shall have Vines in a few years to which we could, if desirable, tie horses as well as asses. "A close damp atmosphere charged with pestilent vapours" is not, however, the treatment Mr. Thomson recommends, nor, happily, the treatment here adopted.—H. K., *Pontchartrain (Seine-et-Oise)*.

ALLOW me to suggest to "H. S." (page 290-1), that he would be doing a favour to the readers of your Journal if he would concisely state the mode of Vine culture which he recommends. This would be more useful than raising objections against the system advocated by Mr. Thomson and followed by other gardeners. If this latter system is found to produce fruit so excellent in quality that its equal is to be met with only in some rare spots of the most favoured regions, theoretical objections must surely fall to the ground.

As to temperature, I am not in a position to controvert "H. S.'s" account of the warmth of Western Africa; but I have the authority of the Government Astronomer for stating that at Madras the maximum of May is 99.2, the minimum 78.5. Now, it is well known that in countries bordering on the tropics the summer temperature is often, from their length of days, equal or even greater than that of the tropics themselves. It is for the purpose of forcing that British gardeners use high temperatures. They are perfectly aware that the ordinary varieties of Grape, such as Black Hamburgh and Royal Muscadine, can be ripened most perfectly in September and October without any artificial heat at all, provided they have a house to themselves.—G. S.

CHASSELAS NAPOLÉON GRAPE.

SINCE our notice of this Grape in the collection of Mr. Knight, of Pontchartrain, at the exhibition of fruit in connection with the Congrès Pomologique de France, we have many communications regarding it. Mr. Knight stated in his observations, published a week or two ago, that Chasselas Napoléon was the same as Panse Jaune; and so far he is right, for there are two varieties of Grapes cultivated in France under the name of Panse Jaune, and this Chasselas Napoléon is one of them. But the great and most important distinction between these two is, that the one sets every berry and the other sets hardly any. That which is the preferable one was shown by Mr. Knight under the name of Chasselas Napoléon, and for the benefit of British Grape-growers we now announce that it was distributed by the Royal Horticultural Society two or three years ago under the name of *Bicane*, its original and most correct one. Some of those who were fortunate enough to participate in that distribution may ere this have fruited it, and will be able to give an opinion upon its merits. We have known it for years, and can safely assert that it is by far the handsomest and most valuable early white Grape yet known, and far surpasses Buckland Sweetwater or any other Grape of that class.

RIGHT OF TENANT TO REMOVE TREES.

WILL you inform me whether a tenant who has occupied a garden for thirty years, can, on leaving, remove trees, roots, &c., and whether young wall trees can be removed? The garden was made by the present tenant, and all the trees, &c., planted by him. It was not taken of the present landlord in the first instance, he having bought the property about twenty years ago. It has been a market garden the whole time, and there has never been any objection made to trees being sold and removed till now that the tenant is leaving. The garden is taken in addition to a dwelling house, and is held yearly.—A. T.

[If the tenant was when planting the garden, and still is, a nurseryman and market gardener, and the trees, plants, &c., have been sold and removed during the entire tenancy down to the present time, we are of opinion that the trees, wall trees (if

they were for sale), and other stock that was for sale, may be legally removed by the tenant. Trees, &c., planted merely to sell their produce, we think, cannot be removed by the tenant. It is most advisable, however, both for the landlord and tenant to have an amicable arrangement, so that the landlord may have those trees left which he may desire.]

WHAT QUALITIES SHOULD A BEDDING PELARGONIUM POSSESS?

I SEE at page 270 of THE JOURNAL OF HORTICULTURE, that Mr. Wills makes Pelargonium Miss Watson the butt to shoot at. Mr. Wills's opinion is in opposition to that of such men as Messrs. Eyles, Gibson, D. T. Fish, J. & C. Lee, the Rev. J. Dix, and others of equal standing, who have, with at least twenty other judges, at all the principal shows (including the Manchester National, Royal Horticultural, Royal Botanic, Crystal Palace, York, Peterborough, &c.), conferred upon Miss Watson the highest testimonials—viz., first-class certificates. And yet Mr. Wills condemns these beautiful round leaves with their highly defined colouring, because he happens to have a plant with round leaves of little more substance than tissue paper and no constitution. If this had been his opinion previous to September 17th, why did he boast that Northern Star was to be the winner, or, at least, so near in the race as to require a good judge to distinguish the winner? I leave it to judges of greater talent to decide, if there was a good leaf on either Northern Star or Florence at the Kensington Show.

As to the round-leaved Pelargoniums, especially for bedding purposes, every one who knows anything of Pelargoniums chooses the round-leaved kinds, for the simple reason they have generally the finest constitution. It was only at the Royal Horticultural Society's Meeting of October 15th, that a first-class certificate was awarded to Ealing Rival, a variety of the same type and class as Miss Watson, with its fine distinct colouring, and, undoubtedly, it is well worthy the recognition it received.

As to the decision of the judges on September 17th, I beg to differ from Mr. Wills. I am quite willing to leave my case in the hands of the gentlemen I have mentioned in the foregoing part of this reply, and it is to them I appeal for a settlement of the matter as to the merits of Miss Watson as a bedding plant. Men of ability and standing who are quite disinterested, and whose names I can mention if required, will testify to having seen it growing outside as freely as Tom Thumb, and, moreover, that it proves most effective at a distance, where Mrs. Pollock, Lady Cullum, Lucy Grieve, Florence, and any others yet in commerce, are a mass of confusion and ineffective. I think the plants exhibited October 15th, will set the matter of constitution at rest, they being well over the sides of the pots and in good colour for the season, though they had been taken from the parent plant only ten weeks. I doubt very much if Northern Star would make plants of the same strength in twenty weeks; but if Mr. Wills will wait patiently I will let him see the beautiful Miss Watson, as Mr. Robert Fish and Mr. D. T. Fish justly term that variety, from 2 to 3 feet high within the twelvemonth.

I am of opinion that Mr. Wills's Golden Zonals ought not to be exhibited against the Variegated Zonals, and all the best judges will agree with me. They form two distinct classes.

In conclusion I beg to say, that in my opinion Louisa Smith and Perkins's Victoria are but second-class plants. Miss Watson and Mrs. Dix are a hundred per cent. superior to the two.—JOHN WATSON.

NOTES IN JERSEY.

HAVING had occasion to visit Jersey, and having read with much pleasure an article in your Journal on Mr. Pond's green-houses, I think that, perhaps, a few more particulars concerning the horticulture in this island may not be altogether uninteresting to your readers.

On the 16th of October I attended the Autumnal Horticultural Exhibition held in the public market. There was but a very meagre show of flowers compared with the fine shows we have in England, the Dahlias and Fuchsias were, however, very good, the former being much admired. The fruit, Jersey's great boast, was magnificent and such as one rarely meets with, especially the Chaumontel Pears, which were extraordinarily fine, and rendered almost ugly by their huge proportions. These Pears are now being sold at from 30s. to £4 per hundred.

Mr. Pond carried off about a dozen prizes, and received an extra prize for some most beautiful black Grapes. An im-

mense Pumpkin weighing 85 lbs., and some Indian Corn, exhibited by Mrs. Macreight, attracted much attention.

Mr. Tidey exhibited some honey made this year by his Ligurian bees (referred to at page 17), which, together with the octagonal super in which it was contained, weighed 21 lbs., and he estimated the weight of the whole hive to be 100 lbs.

It is surprising to me that these bees are not more sought after in England than they are at present. The queens are singularly prolific, and the outlay on the first hive would in a very short time be repaid with ample interest.—C. B. EDUAM.

DEPTH OF PLANTING ROSES.

"WILL Roses on the Briar suffer, if planted rather deeply—say from 4 to 6 inches?"

One would at first sight think that four words would answer so simple a question. I think, however, it is better not to be so concise.

I learned two grand facts from books, and, I believe, the rest I owe to experience. I learned from Mr. Rivers's book that Manetti Roses must be covered at least 1 inch over the point of union; and from THE JOURNAL OF HORTICULTURE, that if you plant a Briar Rose deep you will first have weak wood and poor flowers, then weak wood and no flowers, and then death. I found that to be quite right.

There is an omission in Mr. Rivers's, Mr. W. Paul's, and Mr. Cranston's excellent works, as to the proper depth to plant Briar Roses. Probably they omitted it because different pieces of ground differ so much as to situation and quality. Briar Roses, and I believe other stocks, have an affinity for clay, so that more liberty may be taken in such land, than in that which is of inferior quality. If there had been no gardeners nor spades, all seeds must have dropped on and rooted from the surface. Our hedgerow trees, and most of our noble forest trees originated from dropped seeds. These have noble surface roots. Every one has seen the roots of Elms coming up through the grass in all directions round the trees.

All vegetable nature sighs for the surface, but we bury rather than plant. In my opinion 4 inches is as great a depth as Roses on the Briar should be planted. I think shallower planting better, provided the planter will dry mulch in winter, and wet mulch in summer. A Briar Rose does not like its roots being burned, and hence it likes mulching. To avoid burning, and escape mulching, people sepulchre it. Hence the rind is soon covered with serge or lichens, and the tree deteriorates. There is only one thing against shallow planting, and that is the troublesome suckers; serge and lichens betoken want of free drainage.—W. F. RADCLIFFE.

THE SCALE INSECT.

HAVING a strong fancy some years since to grow a collection of Oranges, Lemons, Shaddocks, Citrons, &c., I procured all the best varieties I could hear were in cultivation. For a time I was delighted with them. The beauty of their foliage, the perfume of the flowers, and the golden fruit pleased every one, and as they sold freely, I increased the stock. Whether from the stock being larger the plants received less attention, or from some other cause, I cannot tell, but they became infested with scale, which spread to Fig trees and other plants.

I had them carefully washed with warm water in which quassia chips had been boiled, and to which soft soap had been added, as used for aphids, but with little effect. I then had them sponged with a strong solution of Gishurst compound leaf by leaf, to the great disgust of the boys employed. This appeared to clean them, but before they were all finished the first-cleaned wanted doing again. I began to think no plants would pay for the trouble these caused, and that no one would long persist in their cultivation, as it appeared next to impossible to keep them clean.

Seeing Mr. Rivers's notice of Mr. Saunders's recommendation of methylated spirits of wine, I tried it on a badly-infested plant, wetting the leaf well with a large camel-hair brush. I used a very soft brush, because I was anxious not to injure any of the insects by mere friction. In a few hours I, or rather we (for Mr. Barron, of Elvaston, was with me), examined the leaves carefully, and found about one-third of the insects dead. A second dressing killed the greater part of these troublesome pests, but still there were a few alive, and I came to the conclusion that, as it could hardly be supposed a whole collection of plants would be as carefully wetted as the leaves we ope-

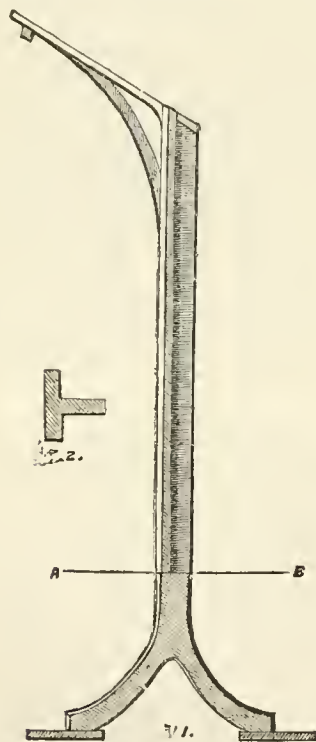
rated upon, it would be a troublesome and not very efficacious remedy.

Having heard of Fowler's insecticide, and receiving a list of extraordinary testimonials in its favour, I filled a large vessel of tin, made wide and shallow, with a mixture of this preparation of the strength recommended, and dipped all the smaller plants in it. Almost every insect was killed, and the youngest leaves were quite uninjured. It is said to kill every insect which infests plants, if so it is invaluable; at any rate it was a complete cure for the scale.—J. R. PEARSON, *Chilwell*.

THE CHILWELL NURSERIES.

THE pages of this Journal have been frequently enriched by communications from Mr. J. R. Pearson, of Chilwell, who is also the author of two most useful little works entitled "Hints on the Management of Orchard Houses," and "Vine Culture under Glass." The former has already reached its fourth edition, the latter its second, though it first appeared only a few months ago. The fact of their having been so appreciated by the public is a good evidence of the value of their contents, and indeed the instructions which these treatises contain, are based on no mere theoretical deductions, but on the results of the actual experience of a thinking, inquiring man. It has been at Chilwell that these results have been worked out, and it is therefore conceived that some account of the nurseries there will not be destitute of interest.

The Chilwell Nurseries are situated about four miles and a half from that great manufacturing centre Nottingham, and



1, Iron pillar of T iron; 2, Section; A B, Ground-line.

within an easy walk of Beeston Station on the Midland Railway; this, however, is only true of the home grounds, for Mr. Pearson has much outlying land, partly in nursery, partly in orchards, nearly the whole of which is his own freehold, and amounting altogether to about 150 acres. Although some parts of the nurseries are situated at a considerable distance from others, and a little inconvenience is sometimes the consequence, yet this is probably more than compensated for by the variety of soil and positions thus afforded, especially as the home ground, which is very compact, contains all the glass houses.

Of these the largest is an elegant span-roofed orchard-house, 100 feet long by 30 feet wide, built last spring by Mr. Foster, of Beeston, by whom, with the exception of two or three of the oldest houses, all the others were likewise erected.

The sides of this noble structure are of wood, but the roof is supported at the sides by iron standards, similar to that represented in the preceding engraving, placed 10 feet apart, and resting on brick piers below the ground-level. The effect of these is to give the house such a footing, as builders would say, that there is no possibility of its being blown over, or, indeed, of its stability being affected even by the most violent storms of wind experienced in this country.

During the disastrous storm of the 3rd of December, 1863, when it blew at Liverpool in gusts travelling at the rate of ninety-three miles an hour, the neighbourhood of Nottingham did not escape, for hundreds of trees were uprooted, and numerous greenhouses were unroofed, or had their sides blown in; and Mr. Pearson believes that had he not secured a large orchard-house built without iron standards, by fastening it down with ropes, and adopting means for its support, it must have given way, although another house constructed with standards, as above, stood unshaken and had hardly a pane of glass broken. This determined him to employ them for the future in any large house which he might erect. The great danger of injury to glass houses by wind has been frequently pointed out in these pages by the Rev. T. C. Bréhaut, especially with reference to the Channel Islands, but in all localities in this country the same danger exists to a certain extent. Presuming the pressure of the wind in a violent gale to be 30 lbs. to the square foot, though in the storm of December, 1863, it was at Liverpool nearly half as much again, the side and roof of a



The Old Orchard-house.

house presenting to the wind a perpendicular surface of 1500 square feet would be exposed to a pressure of 20 tons, and this not a steady pressure uniformly distributed, but unequal in its action on different parts and coming in a series of percussions, like the strokes of a hammer. Against a pressure of this kind houses merely resting upon brickwork cannot be considered safe, and those more securely fixed to it are not always so in severe storms, but these patent iron standards not only secure the perfect stability of the house, but its moveability as well. The latter property though not a matter of much importance to those who, like Mr. Pearson, put up houses on their own land, is a great object to a large class of amateurs, who, however desirous of possessing a glass house for the growth of plants or fruits, are yet unwilling to erect one which at the expiration of their tenancy would become the property of the

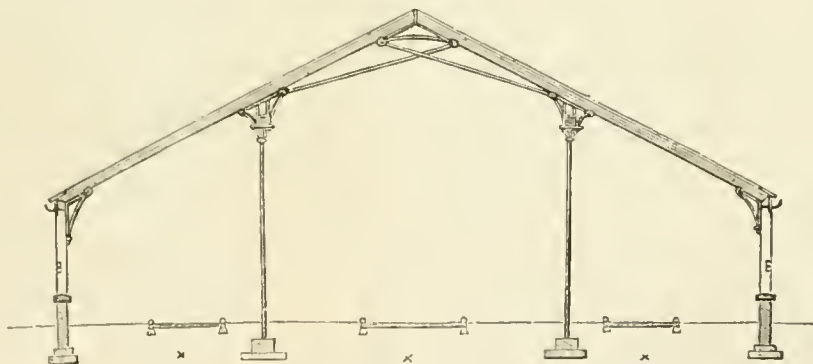
landlord, and for which, though incurring all the expense, they might actually be made to pay an increased rental.

Returning now to the description of Mr. Pearson's fine new orchard-house, internally two rows of iron columns, 10 feet apart in the line, support the roof, which, with the sides above the boarding, is glazed with 21-oz. glass. The ventilation is admirably arranged; the side sashes open simultaneously by a handle working a rod and segment-arm, whilst at top a ridge-board acting like a parallel ruler, is lifted up by means of a handle, bevelled wheels, rod, and lever arm. So smoothly and easily did the whole work that the entire length of the ridge-board was lifted up by no greater exertion of strength on the handle than could be exercised by the little finger, and even then care had to be taken not to overwork the apparatus. This house is the last erected, and as such is that which contains all the improvements which the experience with the others has suggested. Though constructed of the best materials, its cost did not exceed £300, and to heat it, if it were to be employed otherwise than as an orchard-house, would take about £100 more. Some pot trees of Coe's Golden Drop Plum were here in fine bearing, and the fruit was most delicious—perfect sweetmeats. Mr. Pearson remarked that this variety, Jefferson, and Reine Claude de Bavay, are the only Plums which with him are really improved in flavour by being ripened under glass, the climate being too cold for them to come to perfection in the generality of seasons, except when the trees are trained against a south wall.

The next house was a span-roofed vinery built last autumn, and measuring 100 feet in length by 24 feet in width. Being intended also as a Pelargonium-house, there is not more than 3 feet of border inside, confined by retaining walls 2 feet in height from the floor, but outside the borders will be added to as necessary, until their total width shall have reached 14 or 15 feet. The sides of this house, like those of the preceding are supported by iron standards resting on brick pillars, between which the roots of the Vines planted in the three-feet inside border can pass into that outside. Heat is afforded by two flow and two return-pipes on each side, one flow being directly under the front lights, the other along the retaining wall by the side of the path where also are the two return-pipes; to economise heat the flue of the chimney is carried under the pathway the whole length of the house. In this

most eligible for the purpose. This, like all the newer houses at Chibwell, is span-roofed, a form of construction which Mr. Pearson prefers to the lean-to, not only on account of its superior elegance, and when employed as conservatories or orchard-houses the agreeable promenade which such houses form, but also because affording light on all sides, and being more convenient for most gardening operations. However much there is to be said in favour of lean-to's as regards cheapness of construction at first, and their afterwards economising fuel when artificial heat has to be employed, there can be no question that the span-roofed form is far more convenient both to those who have to perform the labours of cultivation, and to those who come to see the results. What, for instance, can be more unpleasant than to pass through a narrow low-roofed vinery, afraid every moment of touching the bunches of Grapes overhead? However fine these may be, the stooping position which has to be adopted seriously impairs the pleasure which would otherwise be felt by their inspection—in fact, prevents all their beauty being seen. In greenhouses and conservatories, therefore, where but little artificial heat is employed, and in orchard-houses where there is none, there can be little doubt that as a rule the span-roof is the preferable, on the other hand for forcing, and where utility alone has to be considered, the balance of advantage seems to be in favour of the lean-to.

The next house is that which, until superseded by the one first described, was called the large orchard-house, but now it is known as the old orchard-house. It must not, however, be supposed that though thus taking a secondary rank, it is either antiquated or inelegant; far from being so, it is, as may be judged by the engraving in the previous page, taken from Mr. Pearson's "Hints on Orchard-Houses," a pleasant promenade at all times, and especially so when the fruit trees are covered with their heavy crops of finely-ripened fruit. The Vines which are trained on the roof and partially cover it, when in bearing add much to its effect, and afford a pleasing shade, but Mr. Pearson is rather disposed to question the propriety of their remaining there much longer, thinking that if not removed, or, at least, prevented from taking the extension which they shortly will do, their shade will prove injurious to the fruit trees beneath. This house is 90 feet long by 30 feet wide, and the roof is supported by iron pillars in the interior, and strengthened by tie-rods as shown in the annexed section.



vinery are twenty-seven permanent Vines of the best varieties, and a large number of seedlings for experiment, besides several hundred fruiting Vines of different kinds in pots, with finely-ripened wood and large buds. There was likewise a fine young stock for growing into strong Vines next year. Mr. Pearson here pointed out a new Grape, the cane of which, when he received it from the nursery, was imperfectly ripened. Being afraid if he placed it in a hothouse to complete the ripening of the wood that the eyes would start, he inarched it on a strong Vino, where it is now growing freely, and thus saved the bottom eyes.

The next house, of the same dimensions as the last, was devoted to pot Vines plunged in three beds running the length of the house, and under each bed was a layer of slates forming a chamber about 6 inches deep, which served to contain a flow and return four-inch pipe. Altogether there are ten rows of pipes in this house, in addition to which the smoke-flue is carried under the pathway to economise heat. It contained about 1500 strong fruiting-canes, besides young Vines advancing.

A fourth house, 60 feet in length and 20 feet wide, likewise contained Vines in pots for planting out, and in every respect

There is a central path extending from end to end and two side paths, all three of which are paved, and edged with neat round-headed tiles. The area is thus divided into four borders, in which are eighteen standard Peach and Nectarine trees that have never been root-pruned, and, Mr. Pearson remarked, they grew as freely and cost as little trouble as Willows. The result of this natural mode of treatment—natural at least as compared to that which has to be pursued when the Peach tree is grown against walls out of doors—was visible in the fine health, immunity from insects, and the abundant bearing of the trees, for such they well deserve to be called. Crawford's Early, Belle-garde, also known as French Galande, and Noblesse Peaches had been loaded with fruit, and Pitmaston Orange Nectarine was the same. Great quantities of the produce from this house had, however, been already gathered by the beginning of September, and sent to Nottingham market, the Peaches bringing on an average 4s. per dozen, a price which, considering the immense difference between wholesale and retail quotations, was very good. Numbers of fruit, however, still remained on the trees, and afforded good evidence of the excellence of the fruit both as regards size and flavour. Walburton Admirable.

one of the best of the late Peaches, was, of course, not ripe, but the tree was bearing an abundance of large fruit. The stock, it may be remarked, on which the standard trees are worked is that known as the Brompton. There were also a number of fine pot trees, many of which were in excellent bearing, though they had been in the same pots—13-inch—for several years.

(To be continued.)

NEW ROSES.

ALTHOUGH my notice of new Roses in a recent article was confined to those sent out in the spring of 1866, of which many have now been proved, the kinds named did not amount in number to more than half of those put in commerce by the different raisers. There may, therefore, remain some deficiencies to be supplied, and which another season may prove to be worthy of some notice. I gave to the utmost the information I possessed, in the hope that it might prove acceptable to the many inquirers who are naturally perplexed and often disgusted with the endless array of strange names yearly brought before them. The desire to obtain plants of the best new kinds as soon as possible is always pardonable; but so frequently do the supposed best prove to be worthless, that disappointment succeeds as a matter of course. Again I join with other contributors to these columns in urging upon our Rose friends to be patient, and let the new Roses be sufficiently proved before they run the risk of losing their money, and, what is worse, their temper also.

Incomplete as the review of the 1866 Roses may seem to be, still more so must be any criticism on those of the present year. My friendly correspondents must, therefore, pardon me if I decline to speak positively of any single one of them; at the same time, the slender knowledge I have of them is at the reader's service. These Roses must have the trial of one winter and another summer to ascertain their constitution and flowering qualities. There may be some of them that will really prove acquisitions; but it is more than probable that by far the greater number will in a short time be rejected; the experience of many past years has invariably shown such a result.

Last November the announcements of the French growers were sixty varieties; these are now called the 1867 Roses. I have seen but fifteen of them in bloom, some of them simply cut blooms on the exhibition stand; but being shown by growers who never exhibit bad Roses, they were seen under favourable circumstances. They were Mademoiselle Annie Wood, Charles Verdier, and Napoleon III.—the first two very good, the other far short of the description given by the raiser, who states it to be "of a magnificent and unique colour, of two colours perfectly distinct—vivid scarlet and deep slaty violet." He also adds, "variété extra de tout premier ordre, et d'un effet incomparable." Comte Litta, by the same raiser (E. Verdier), is of fine colour as a semi-dark rose, but thin and defective in form. Antoine Ducher is large and beautifully cupped, it grows well, and is in all points apparently good. Eugène Scribe I have marked in my note-book as inferior. Horace Vernet promises to be one of the best; seen under different circumstances and on different soils it was invariably good. Madame Pulliat and François Treyve, the first a deep rose colour, of globular form, but somewhat small, the other brilliant scarlet, are both excellent. Triomphe de Soissons is a light rose of little merit. Gloire de Montplaisir seems too small for the English taste. Monsieur Noman, delicate pink, is very pretty. Madame Rival, like Auguste Mie, may prove a better grower and expand its flowers better than that once favourite variety.

To those who can grow Tea Roses Madame Margottin will be a great acquisition—citron yellow, with peach centre, very beautiful. Bouton d'Or, if it opens well, will be a good addition to yellows.

To the one hundred and twenty, or thereabouts, of new Roses of the present and last season, is now to be added the list for next year which has just been distributed. It contains fifty-eight Remontants (Hybrid Perpetuals), five Teas, two Bourbons, two Moss, and two Noisettes, in all sixty-nine by the French growers. To these may be added two promised by Messrs. Lee, one by Messrs. Paul & Son (Duke of Edinburgh), and one by Mr. Turner (Miss Ingram), making a total of seventy-three. It would be a needless waste of space to give even the names in this long catalogue.

The tactics of the French growers as regards the colour of their flowers, seem to be somewhat on the change, for instead

of finding the hitherto, usual succession of crimson scarlets, and scarlet crimsons—there are but few of that colour, but in the place there are upwards of twenty-five of various shades of rose colour—as "rose aurore," "rose cerise," "rose vif," "rose métallique," "rose tendre," &c. The reader will readily perceive that it is not easy to describe from the above expressions what the tint of the flower really is. Purple Roses, if good, are a desideratum; it remains to be seen whether it will be satisfied out of the ten or a dozen now announced, as "pourpre rouge," pourpre ombré de brun," "pourpre ombré de vermillon," &c.

No Rose in which purple predominates has yet been in cultivation that can rank with Charles Lefebvre, Sénateur Vaisse, Pierre Notting, Comtesse de Chabillant, and other first-class flowers; Alfred de Rougemont is still the best of its colour, being fuller and of better form than Triomphe des Beaux Arts, now almost forgotten, but good in colour only. André Leroy d'Angers is a failure, and Carl Coërs equally so. A good purple Rose will doubtless be produced before long, for not long since I was shown a very promising English seedling from the seed beds of Mr. Mitchell, and of it, we shall hear more in time, should it realise the favourable expectation entertained.

To single out any of the forthcoming novelties for especial notice, will be nothing more than to conjecture that they are likely to be useful if not superior additions. On the whole, a perusal of the list at least shows a more moderate, and therefore it may be hoped a more truthful description than has sometimes been given. Some read very well, for example.

Clotilde Rolland, vigorous; flowers large and full, having the form of Madame Furtado, delicate rose cerise.

Comtesse de Falonx, vigorous; flowers very large and full, well formed, rose shaded mauve.

Merveille d'Anjou, vigorous; flowers, very large and full, very fragrant and lasting, reddish purple.

Souvenir de François Ponsard, vigorous, constant bloomer; large globular flowers with broad petals, bright rose, very fragrant.

Curé de Charentay, vigorous; large and full flowers in corymbs, deep purple.

Deuil de l'Empereur du Mexique, vigorous and free blooming; flowers large, full and well-formed, blackish purple.

La France, vigorous; flowers very large, full, well-formed, and lasting, petals broad silvery white within, lilac rose without.

Madame Chirard, very vigorous; flowers large, full, and well formed, vivid rose. This variety is a seedling from Souvenir de la Reine d'Angleterre. Any seedling from that fine Rose showing an improvement on it will most likely prove good. There is also another seedling from the same called Baron de Rothschild, a name that has already been given to one of the crimson scarlet Roses, described as "presque pleine," that is, not quite full; this would indicate a defect.

Charles Turner, vigorous; flowers large and full, well formed, brilliant vivid red.

What amount of confidence is to be placed in this last, when almost every name eminent in British horticulture has been attached to a Rose that has invariably proved worthless? What Rose grower retains in his collection those flowers that have received the names of Thomas Rivers, William Paul, James Veitch, George Paul, William Bull, and indeed every name of note known and respected among us? Can we hope that the distinguished florist of Slough has received a more durable compliment?

A correspondent remarks that I have made an omission in my article on Roses of 1866, which should be rectified. I acknowledge the omission, but it was quite an oversight, and unintentional. I have Messrs. Paul & Son's Princess Mary of Cambridge, and both here and in other gardens in the neighbourhood, it has invariably been good this season, and much admired. I can add deservedly so.—ADOLPHUS H. KENT.

DEVIATIONS IN ORCHARD-HOUSE CULTURE.

HAVING had an experience of something closely approaching thirty years of Mr. Rivers's skill, and his generosity in imparting knowledge, I venture to reply to "C. P.'s" letter in page 293. It is simply clear that most of his improvements on Mr. Rivers's methods arise from want of knowing what those methods are; in fact, they are corrections of his own misunderstandings his text. There is only one of his seven "deviations" that I can by any amount of squeezing get out of this condemnation. His results also are of the kind which gives ground

for such sweeping scorn as some writers pour upon orchard-houses, on account of their own failures in culture. An average of less than twenty fruit to a tree, including Plums, leaves him much room for hope in coming years, if he will but follow carefully Mr. Rivera's directions. I have gathered more than two hundred Pears off a potted tree this autumn, and as to Plums, they are when green as thick as berries on the most closely-packed Gooseberry branch. As to counting them when ripe it would be a troublesome business. Of course, thinning must be practised to a heart-breaking extent; but, perhaps, the most economical way of using the glass is to have two sets of trees, and work them to the full, and give them perfect rest in alternate years, the tree out of use being kept under the glass for the winter months to secure healthy roots and well-ripened wood. But as I write in no spirit of boasting of my own doings, or of contempt for those of "C. P." who is on the right road after all, I would urge him to go and visit Mr. Rivera's houses, and see for himself, both his method and the results, which make those of an amateur fade into insignificance.

However, the object I have in writing this letter is to warn amateurs, and especially beginners, against any careless reading of Mr. Rivera's treatise. They are to an experienced gardener easy reading, but at the same time the writing of one who has for years been master of his subject. They are so full of information, and so concisely expressed, that almost every sentence requires to be weighed in order to be sure of all its meaning. Indeed, I know few books so overflowing with the unconscious expressions of vast experience, and genuine experimental science.

I have found many persons fail in fruit tree culture from overlooking a sentence, sometimes even a word in these manuals compressed, as he advises the soil in the pots to be. Without any other help, a keen observer of nature after a few blunders might meet with fair success.—W. KINGSLEY, *South Kilvington*.

PROPAGATING MRS. POLLOCK PELARGONIUM.

MR. LUCKHURST describes (page 275), his system of propagating this fine bedder. Your excellent correspondent, "R. F.," observes in the succeeding page, "It is not easy to have all advantages," and Mr. Luckhurst's mode of propagation is no exception to this rule. I would not for a moment doubt the success of his plan. I think it good, and that it would answer for those who could cut their plants up early in the season; but I fear it would not answer for the majority of gardeners. Granted that the object of most people possessing Mrs. Pollock is to increase the stock as quickly and to as large an extent as possible, I fail to perceive that this end is to be best attained by following the plan suggested, for by Mr. Luckhurst's own showing he only obtains two crops of cuttings, whereas by the mode I am about to detail, the crops follow in succession throughout the spring. There are thousands of places in the United Kingdom where, as at this, the flower garden display is required chiefly in September and October. In these cases it would be the height of imprudence for a gardener to closely prune such plants as Mrs. Pollock Pelargonium, because the buds or borders would be spoiled, and the general effect ruined. On the other hand, if the cuttings are taken late not half of them will pass through the winter. For these reasons I have adopted with success the following practice, which, perhaps, may be of use to some of your readers.

The plants are covered every night in the autumn to protect them from the early frost. This is of great importance, for if the wood is frozen much injury is done. They are taken up about the middle of October, potted in the compost used by Mr. Luckhurst, than which nothing suits them better, and are placed in a house with a little fire heat. There they are kept close and rather dry for a few days until the roots begin to grow, when air is gradually allowed to play about them, and they are kept cool all winter.

In the third week in February the points are all taken off, and each of these cuttings is placed in a thumb-pot in compost consisting of three parts sand and one of loam. A length of 2 inches will be quite enough for these cuttings. The plants are allowed no water until they break, which they will do in a very short time; the uppermost eyes will start first. The plants should now have a little more heat. When the first eyes have grown half an inch, or at most an inch, they should be taken off, together with the wood, half an inch above the next eye. These eyes are cut out just like the eye of a Vine, or a bud for budding Roses, and treated like the first cuttings;

the wood and bark are just covered with soil, pressed rather firmly. In three weeks, if they have been kept just moist, they will all be rooted, and in the same time another crop of cuttings will be ready. This process must be repeated until three or four joints are left on each shoot, when it must cease. The old plants will make good bushes in a little time, and with care every cutting will make a good plant by June.

I have just taken up some of my plants, seven months old from the cutting, and I find they measure from 12 to 18 inches in diameter.

I hope Mr. Luckhurst will not think I have taken this matter up in an unfriendly spirit. I have heard of many failures, and think that those who have succeeded should make their practice known.—GEORGE BOYES, *Barley Thorpe Gardens*.

A CAUTION TO NURSERYMEN AND OTHERS.

A PERSON of the name of Richmond having visited various nurseries and obtained goods under false pretences, we caution the nursery trade. He is a man about 5 feet 6 or 7 inches in height, of dark complexion, with dark brown whiskers, has lost his front teeth; is of good address, and represents himself as having been a traveller to a large nursery establishment.

NOTES AND GLEANINGS.

THE Viceroy of Egypt, when recently here, was so struck with our flower culture, and the plants and flowers he saw, that he has given a commission to send him out a thoroughly proficient flower gardener, one capable of carrying out horticulture in a similar manner to the style adopted in this country. The Viceroy already has an English gardener, but the one now sent out goes exclusively for the cultivation of flowers, a new and entirely separate appointment.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Asparagus, it is time to think of forcing a little for early use; the principles applied to the forcing of Sea-kale are in the main applicable to this delicious vegetable, except that *Asparagus* requires abundance of air when growing through the soil. *Cabbages*, hoe and loosen the ground between the rows. *Celery*, earth-up. *Endive*, plant this and *Lettuces* in frames. *Jerusalem Artichokes*, take up. *Peas*, a few early sorts may be sown in a sheltered border; but too much dependance should not be placed on them, for they are liable to the attacks of many enemies, such as mice and slugs, which must be guarded against as much as possible; plants should be reared under protection to fill up vacancies. A few *Mazagan Beans* may also be planted at the same time. *Potatoes*, keep them dry; they will not bear putting together in large quantities this season; the straw scattered over them to prevent the access of light should be dry, and lime in fine powder should be occasionally diffused through the air of the apartment in which they are stored. *Salsafy*, take up, also *Scorzoner*, packing the roots in clean sand for a supply in case of frost. *Sea-kale* should now be introduced to a bottom heat for the earliest supply. Those who force it where it grows may apply some hot manure round a few pots.

FRUIT GARDEN.

Proceed with the preparation of borders, and the transplantation of fruit trees. Watering newly-planted trees is not so essential at this season as in spring, yet it ought not to be omitted, for by washing down fine particles of soil about the fibres, the latter are kept in better position, and, on the whole, in closer contact with that from which they have to draw nourishment, than could be effected by treading. When the roots are covered, the soil about them may be flooded, and the remainder of it filled in after the water has completely subsided. Remove leaves from the bottoms of walls, for although they form good manure for the trees, yet they harbour injurious insects. Proceed with the pruning of fruit trees as soon as the leaves have fallen; let nothing of this sort remain till spring, which period will bring its own labour.

FLOWER GARDEN.

The flower garden is now so far robbed of its beauty, that steps may be immediately taken to secure a better arrangement for the next year; this is necessary before the flowers are de-

cayed. Let all observations as to improper heights or misarrangements of any kind be made now. Coloured sticks might be made use of as to the arrangement of both colour and height. The colour of the stick would indicate the colour required to fill that station, whilst the name of the plant and remarks might be written thereon. Plant all autumn bulbs without delay. Let all biennials be planted out soon, such plants as the Sweet William and Wallflower, are of great use in flower borders, and may be planted three or four in a mass. Dahlias should be marked forthwith. Pinks may be planted out, and Carnation layers or pipings still potted to place in frames. Standard Roses that have made luxuriant growth during the summer, should now be cut moderately back to lighten the head, to prevent damage by wind; also stake and tie such as require it. As the different kinds of bedding plants become destroyed by frost, they should be removed, and the beds trenched quite to the bottom; by attending to this now, much time and labour will be saved next spring, and the beds will be in a much better condition for planting. Hardy annuals that have been sown for blooming early in spring, if too thick, should now be thinned, and transplanted into vacant beds. New work, laying turf, and planting, should be forwarded now as much as possible before the weather changes to wet. Dahlia stems that are blackened by frost should be cut near the ground, but the roots need not be taken up for a short time, if the weather continue favourable.

GREENHOUSE AND CONSERVATORY.

The time is at hand when ungenial weather will frequently drive the labourer in-doors, where a stock of work should now be provided. The tying of new mats, cutting and picking shreds for the walls, cleaning old nails, drawing bast for the next summer, arrangement of herbs, examining stores, making flower sticks and labels, washing and putting away all spare propagating and other glasses, making straw or reed mats, protectors for tender plants, as well as making a stock of besoms and baskets for the ensuing year, are matters of as great consideration as out-door business, and should be attended to in good time. Gardeners and others should purchase a most liberal stock of Russian mats at this period—in fact, a twelvemonth's supply; these will at once furnish a little in-door labour. Willows should be immediately procured for baskets, and a good stock of cloth for shred-cutting. All superfluous or dead plants in pots should be emptied out, and the dirty pots from every part placed in the shed ready for washing in bad weather. Plenty of broken pots should also be housed in a shed corner to be crushed and sorted in bad weather; they may be fairly reckoned amongst the most important materials for the potting-shed. Any one having old, half-worn sashes without glass, may readily make most useful straw covers of them, well adapted for covering Endive and other salads, Parsley, &c., as also for placing over early crops of Potatoes, Radishes, and Carrots. The straw is drawn through the hands in bunches, and laid across the longitudinal bars of the sash in a regular way. When covered equally, three or four long sticks or laths are placed on the straw in a line with the sash-bars, and bound down to the latter in a few places by tarred cord. If housed when out of use they will last a couple of years. Attend to good arrangement in the conservatory, picking off decayed leaves, thorough ventilation, &c. Fine specimens of Chrysanthemums, late Salvias, with other autumn plants, should be occasionally introduced from the other houses, removing occasionally inferior plants for a while to make way for them. In the mixed greenhouse let every attention be given to a due regulation of the heat. Where everything is grown in one house, it is of the utmost importance that heat shall be in proper proportion to the light. In such a house the proprietor naturally desires to have flowers late as well as early, as far as they can be secured. To effect this, fires must be in use occasionally, even at this period, and to those who are thus circumstanced, we would say beware of night heat; 55° will be sufficient in such a structure for the present. Let the thermometer rise, notwithstanding, to 70° or more during sunshine, observing, when such is fitful, to let the temperature fall to 60° in the day, if dull weather take place.

STOVE.

Plenty of sunshine and free ventilation are now the requisites here, observing much moderation in the use of artificial heat. Let the thermometer rise, however, to 80° or more on bright days. It is not the object now to promote growth, but to take care of that which we have obtained. The season of light and heat is taken advantage of by the diligent gardener who does not work against nature.

FORCING-PIT.

Keep the temperature of this structure by night at 60°, and increase it by day, if necessary, by fire heat 15° above the night temperature. This will assist nature in flowering the few plants and bulbs which bloom in anything like perfection during dull and dark November. All autumnal forcing, whether of fruits or plants, is in direct opposition to nature, and swimming against the current requires great exertion, especially as two currents have now set in—cold and darkness.

PITS AND FRAMES.

Neapolitan Violets should have as much air as possible, and the runners should be removed as they appear. Brompton and Intermediate Stocks intended for next year should be kept dry, and air should be admitted to prevent damp. See that everything is now stored for the winter. Stop Verbenas as they advance, in order to make them bushy.—W. KEANE.

DOINGS OF THE LAST WEEK.

Collecting Tree Leaves.—Few gardeners, however anxious, can act up to their own sense of right and duty, even as respects the commonest operations. A change in the plans of the heads of the family, visitors coming or expected, and other circumstances, will often cause work to be done that might have remained undone, and cause work to be put off that ought to be attended to; and this is often of much consequence in such changeable weather as we may expect now, when every fine day ought to be devoted to forwarding all out-door work as much as possible. The necessity of neatness, and the leaves falling from the trees, make a vast amount of work, and continuous work too, if the attempt must be made to keep the lawns and the walks thoroughly clean. Unless under particular circumstances, and where it is desirable to employ as much instead of as little labour as possible, we do not consider such constant sweeping anything but a work of superfluous attention to neatness.

Strange it is, but true, that many of us will become almost poetic about the wondrous beauty of the many colours which the leaves of our deciduous trees assume in autumn; but no sooner do these richly coloured leaves drop to the ground than we look upon them as suggestive of desolation and of melancholy ideas, and we are never quite satisfied until they are all removed out of our sight. Even to accomplish this near a mansion involves no small labour. Only the other day we had as pretty a piece of short green carpet lawn as the eye ever rested on, and the direction of the wind was such that we hoped the appearance would last for a long time without our being at further trouble; but a change of the wind during the night covered the whole of this piece of lawn with a livery of varied yellow from the Horse Chestnut, the Elm, and the Maple. We just note this that proprietors of places may be reminded of the vast difference of labour involved when it is looked for that these shall be removed every day, when compared with the more easy system of quietly waiting until all, or the greater part, of the leaves have fallen.

This latter plan, so far as the leaves are concerned, may be safely followed in rather low sheltered positions, and then the saving as to labour is immense; but in elevated, exposed places, and in cases where the leaves are valuable, it will not be safe to wait for all the leaves, but collect them whenever they are thick enough to secure a good heap quickly. We have sometimes waited until the great bulk had come down, and had the satisfaction of finding the trees bare after a windy night, and not a leaf to be seen in pleasure ground or park, all having been wafted to the ploughed fields far away. This just teaches us at times to be satisfied with moderate instead of more ample returns for our labour.

We have sometimes in exposed positions tried to combine neatness with economy in the following manner. Near the mansion we have tried to keep the grass shorter and smoother even than in the height of summer, and on that, if there was more than the slightest breeze of wind, the dry leaves would not remain. Walks smooth and rolled will have almost as little tendency to hold a dry leaf; in fact, they would be less tempting than the smooth lawn but for the small hollows at the verges, and even in this respect the less the verge is elevated above the walk the better. Then on the pleasure grounds farther from the house and but little seen, we have let the grass grow longer at this season, or we have scythe cut it without cleaning it up for a few days, and in these cases the long grass, or the small ridges where cut, held the leaves where they fell,

and prevented them so easily careering over the neighbourhood. Those who, like ourselves, have felt the want of a good stock of tree leaves, will excuse reference to such a simple matter. For reasons implied, we have collected a good quantity, though we would have rather delayed the operation; but leaves, short grass, and litter will be useful for many purposes.

We may here, in passing, advert to two questions sent to us by "CONSTANT READERS." First, "Whether would you rake off or dig in the fallen leaves that collect in shrubberies?" and again: "Will not the constant sweeping and taking away of the leaves that fall from fine trees, even in a pleasure ground, tend in time to starve these trees, and thus arrest their free and continuous growth?" And to this latter query we reply in the affirmative, and say that the ground is deprived of the manuring which Nature intended to give it; and so convinced of this are some admirers of trees that, though the leaves must be collected on the score of neatness, the gardener has to return an equivalent in the shape of rich top-dressings. Many a poor piece of land that would not pay for ploughing and sowing, will pay for both well after standing in wood for from thirty to fifty years, and that chiefly owing to the enriching influence of the yearly dropping of leaves and decomposition of the grass which grew in the open spaces. This just reminds us of three, or at least two, fine Elm trees in a pleasure ground. More than twenty years ago they were becoming bonnet-headed, and the leaves and shoots were smaller every summer. In the process of alterations a rich top-dressing was given to the ground, extending at least some 50 feet from the boles of the trees, and the result for many years was almost magical. We can see the old signs of starving returning. Why? The trees have had nothing given to them, and have been regularly robbed every season of what Nature would have restored to them. Several loads of leaves have been taken from beneath them already, as much more, if not blown away, will be removed on Monday, and as yet more than half of the leaves on the trees are greenish, and look as if they required a brisk frost to bring them all down. Just think of the depth of the finest manure that would have accumulated under such trees in twenty, thirty, or forty years, and coming in such gentle additions every year, and all swept away from the trees without any return being made. We have been able to do little in thus assisting even fine specimen trees; but if these noble-headed trees were ours we should like to fork the ground nearly as far as the branches extend, give them from a dozen to a score cart-loads of the best rotten manure, let it lie all the winter, cover with a little soil and turf in the spring, after watering if the weather was dry, and then we should expect for a time good yearly growths and well-sized foliage, indicating luxuriant progression, instead of decrepitude and decay.

The answer as to the shrubberies may now be presumed, and the practice should be varied according to circumstances. If the shrubbery is young, and it is desirable to render it a dense thicket for boundary protection as soon as possible, then the more leaves that can be collected on it, or from the neighbourhood, the better for the shrubs, and these we would point in shallow with a fork, and keep the ground with a hoe free of weeds in summer. When the shrubbery was established, no digging whatever would be required, and all leaves that would not find their way out to disfigure the lawn, should remain, and decompose where they were. In such cases, even in the openest parts, a few barrowloads of soil thrown thinly over the leaves, will be less trouble than taking these out. When a shrubbery is partly opened up, so that specimens stand prominent and alone, it will be best to dispense with digging, and either turf up, or let moss form all round them, and in either of these cases, these open spaces must be cleared of leaves like the rest of the lawn; and then to give the specimens full justice, they ought to have a little assistance, when all the natural manuring is thus taken away. With our constant removing of all that falls from a tree on a lawn, or shrubbery, and yielding nothing in return, we do not give the tree the chances of help it would have, if it stood in the open park, where part of its foliage would be retained in the long grass, or if that grass was mowed or grazed, there would be the droppings of the animals, and at times the rich top-dressings spread over the grass which would help the trees, as well as secure good crops of hay, &c.

If such necessary neatness in removing every fallen leaf from the pleasure grounds involves a lessening of the resources of growth, why do not gardeners more generally allude to or insist on the fact? Why, because though they know it all well enough; they have found out, that whilst neatness must be

insisted on, it is for the proprietor, and not the servant, to find the means of returning an equivalent, because whilst more and more is required in forwarding crops, the gardener finds the heat from decomposing leaves is nearly all that he can depend upon, without increasing the fuel bill, which must not be at all contemplated; and because while he wants all that he thus collects for manuring purposes in the garden, when too decomposed to yield any more heat, he knows that for all such garden manuring, and repaying back what has been taken from the trees, he may look in vain to the huge mounds of dung in the farmyard.

Leaves and short grass as means for affording bottom-heat.—

We will now offer a few remarks chiefly to meet an objection, most kindly stated, as to the danger that may easily result from using such leaves, litter from the stable, and short grass, for obtaining bottom heat almost at once, with little or no previous preparation, as alluded to lately. Leaves intended to be kept for a while cannot be collected too dry. Even then they will sweat and heat a little. When collected now for next to present use, it is as well if they are a little damp. If they lie in a heap a couple of days or so, they will heat almost enough, in such mild weather, either to kill or drive away all the slimy tribe, so apt to be swept up with them, except on the outside of the heap, and, therefore, it is as well to lay that aside when forming a particular bed. Now, such leaves will at once suit any growing plant that requires a mild heat, and the gases and steams given off will never hurt the most tender plant—that is, if other things are attended to as they ought to be, and a greater preparation of leaves before using them is a mere waste of the material.

Now, genial as the heat from leaves alone is, we can have it much stronger if we mix short grass along with them, and it will also be rendered less violent if some littersy dung be also mixed with it, and the litter will make the heat more enduring. We have thrown up such a mixed heap on the Saturday, and then trampled it, and by Monday the heap was as hot as well could be, but not half the size it was on Saturday, and we used it at once to give us some bottom heat where we wanted it in a hurry. We thus secured bulk, which we would have lost with more perfect preparation. We have never concealed the fact that the fumes from such a mixture in a close frame or pit, if they escape into its atmosphere, would kill nearly every growing plant; but we have always stated in addition, that when we used such crude very unsweetened material, we invariably covered it over to the depth of from 6 to 9 or more inches with sweet half-rotten dung, or half-rotten leaves, and then no fumes ever came through it, and yet the heat was all that could be desired. Very little moisture ever rises—in fact, the mixture burns itself dry long before it gives over yielding heat, and it takes a very long time to burn itself out or be thoroughly decomposed.

We mentioned placing some dry ashes on the bed before setting in the cuttings that required a little help and yet not to be troubled with damp; and day after day the ashes remained perfectly dry, until a clever young man, seeing that a few of the pots were a little dry, watered them all overhead with a large rose on a pot, as if he had been watering a seed-bed out of doors in the beginning of July. That thoughtless watering put more injurious dampness in that bed than would have come up, or in, during a month of dull foggy weather.

Of course we wish all who are timid to keep on in the good old way and use no dung until it is so sweet that the vapour that exhaloes from it is as clear and pellucid, when condensed, as a dewdrop. We resorted to the rough-and-ready mode, because with little to go to we thus had fully three times at least the bulk we otherwise would have had, and because for all, and especially temporary purposes, many an amateur might thus take advantage of the heat that otherwise would warm the general atmosphere during the preparatory process. The only safeguard is to keep all the fumes from such rank material from escaping into the atmosphere of the place.

For instance, the other week we were glad to fill a pit with such material to bring some plants that needed a little heat nearer to the glass; but there was a hot-water pipe near the bottom in front, and to take advantage of that in dull or cold weather we had to leave an opening 2 or 3 inches wide between the front wall and the bed, the opening being secured by an old piece of upright paling. Now, if we had made all our bed of such materials, the fumes would have found their way through the openings in the wood into this opening for letting the heat up from the pipe, and soon made wrecks of the most tender subjects in the bed. All this, however, was avoided by

placing against that opening a 6 inch wall of the old sweet material in the pit, and afterwards covering the surface in the usual way. No steam ever appeared, and the sprinkling of dry ashes is as dry as the day it was put on, whilst the bottom heat we wanted for a short time has been effectually gained.

With a heap of leaves in reserve, a little stable litter, and the mowings from the lawn, after grass cutting begins, there need be no difficulty in obtaining a little bottom heat when wanted in most gardens, even from such unpromising, unworked, unsweetened materials. The only point to be considered is, that whilst you heat the surface-covering no noxious fumes shall be permitted to come through it. In the case just referred to, if we had made our bed of fresh rank material right up to the opening, the fumes would have come through there, however carefully we had covered the surface, and that would be something like bolting our doors and leaving the windows open. When the system is in operation every old bed that is to be renewed will have plenty of material just suitable for the surface-covering, and the plants may go in at once without any waiting for sweetening. Bulk of fermenting material is often an object, and this plan, safe when thus acted on, preserves bulk and ensures, when well done, a more gradual decomposition, and consequently a more prolonged heat. Even Cucumbers generally last from spring until now; and when the rotten part is wheeled away in winter enough of half-decomposed sweet material generally remains to be available for the surface-covering that keeps all right. However, as already stated, let all who are timid, or have as much fermenting material as they choose, sweeten and half rot their materials in the good old way.

We have little room to say more than that the pleasure grounds are still very fair, and as yet we have removed nothing, except some belts of *Centaurea candidissima*, as we did not take cuttings soon enough, so as to be quite sure, also some Golden Chain and Mrs. Pollock *Pelargoniums*. A few sunny days have brought out the flowers amazingly.

We have commenced clearing and fresh arranging the houses for the winter, have stripped all the leaves from the low Fig-house, and all the fruit likewise, as we have long proved that long-continued bearing, say into November, always injures the first crop in early summer, and we have cleared a low house next to them, chiefly used for Ferns. Here we had to cut a *Stephanotis* down, as it became infested with mealy bug, and we may state this is the first time we have been troubled with such a visitor for many years. We recollect seeing a few on a small plant sent here more than a twelvemonth ago, and thought we cleared it thoroughly, but no doubt we had missed one or two. We hope we have destroyed it by doing away with the worst plant and thoroughly cleaning the house. The glass roof is low, and as the sashes are moveable, instead of washing the woodwork and glass on we took it off, and well we did so, as many bugs had insinuated themselves opposite the bad plant between the sides of the sashes and the rafters. They had also found their way across the partition, and had begun to show on the Fig shoots. We trust the hot water and hot soap-suds will destroy them; but no one can be too careful in looking over bush plants to prevent their introduction.—R. F.

COVENT GARDEN MARKET.—OCTOBER 30.

A MODERATE business doing with scarcely any variation in prices. Among other imports we are now receiving Prickly Pears from Sicily, which sell at from 2s. to 3s. per doz. Portugal and Spanish Grapes are now coming in in large quantities, but very few samples have any keeping qualities. Arrivals of Potatoes are heavy, both coastwise and by rail, maintaining last week's quotations.

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes doz.	2	0 to 4	Leeks bunch	0	3 to 0
Asparagus bundle	0	0	Lettuce per score	1	0 to 1
Beans, Kidney, ½ sieve	0	0	Mushrooms pottle	2	0 to 3
Scarlet Run, ½ sieve	2	6	Must. & Cress, punnet	0	2 to 0
Beet, Red, doz.	2	0	Onions, per bushel	3	0 to 5
Broccoli bundle	0	6	Parsley per sieve	3	0 to 0
Brns. Sprouts ½ sieve	2	0	Parsnips doz.	0	9 to 1
Cabbage doz.	1	0	Peas, per quart	0	0 to 0
Capiscums, 100	2	0	Potatoes bushel	3	0 to 4
Carrots bunch	0	6	Kidney do.	3	0 to 4
Cauliflower doz.	3	0	Radishes doz. bunches	0	9 to 1
Celery bundle	1	0	Rhubarb bundle	0	0 to 0
Cucumbers, each	0	6	Savoy doz.	0	9 to 1
pickling doz.	2	0	Sea-kale basket	0	0 to 9
Endive doz.	1	0	Shallots lb.	8	0 to 0
Fennel bunch	0	3	Spinach bushel	2	0 to 3
Garlic lb.	0	8	Tomatoes per doz.	2	0 to 3
Horbs bunch	0	3	Turnips bunch	0	4 to 0
Horseradish .. bundle	2	6	Vegetable Marrows, dz.	1	0 to 2

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples ½ sieve	1	0 to 1	Melons each	3	0 to 5
Apricots doz.	0	0	Nectarines doz.	0	0 to 0
Cherries lb.	0	0	Oranges 100	8	0 to 14
Cherriants bush.	8	0	Peaches doz.	8	0 to 15
Currants ½ sieve	0	0	Pears (dessert) .. doz.	2	0 to 3
Black do.	0	0	Pine Apples lb.	4	0 to 0
Figs doz.	0	0	Plums ½ sieve	4	0 to 6
Filberts lb.	1	0	Quinces doz.	0	0 to 0
Cobs lb.	1	0	Raspberries lb.	6	0 to 0
Gooseberries .. quart	0	0	Strawberries lb.	0	0 to 0
Grapes, Hothouse .. lb.	1	6	Walnuts bsh.	10	0 to 15
Lemons 100	8	0	do. per 100	1	0 to 1

TRADE CATALOGUES RECEIVED.

F. & A. Dickson & Sons, 106, Eastgate Street, and Upton Nurseries, Chester.—*Catalogue of Roses.*

Peter Lawson & Son, 1, George IV. Bridge, Edinburgh, and 28, King Street, Cheapside, London.—*Catalogue of Forest Trees and Shrubs.*

Charles Turner, Royal Nurseries, Slough.—*Select List of New and other Pelargoniums, Auriculas, Carnations, &c.*—*Catalogue of Roses, Fruit Trees, Hardy Trees and Shrubs, &c.*

André Leroy, Angers, France.—*Supplement to Catalogue of Fruit and Forest Trees, Shrubs, &c.*

TO CORRESPONDENTS.

N.B.—Many questions must remain unanswered until next week.

BOOKS (T. T.).—You can have the dictionary you name free by post if you forward to our office 5s. 8d. in postage stamps with your address.

GYMNOGRAMMA TARTAREA (*A Ross-shire Gardener*).—As it produces yellow spores, we think you have some other species than *G. tartarea*.

PYRUS SCANDICA (*A Constant Reader*).—This was formerly called *Crataegus scandica*, and subsequently *Pyrus intermedia*. London considered it to be only a variety of *Pyrus aria*.

NAME OF ROSE (Pop).—It is *Maréchal Niel*, about which so much has been written in our Journal recently. It will stand the winter against your south-west wall.

ASPARAGUS KALE (F. H.).—It is quite an old vegetable with twenty synonyms, such as Buda Kale, &c. It is boiled like any other Borecole.

ROSES FOR A SOUTH-WEST WALL (C. E.).—Four out of the twelve named for a low south-west wall—Gloire de Dijon, Général Jacqueminot, Duc de Cazes, and Baronne Prevost. Of the remainder named, four of the most compact are *Scatener Vaisse*, *Jules Margottin*, *Madame Victor Verdier*, and *Jules Margottin*. Almost any of them would suit. The best way to secure ground plants is to tie one or two stems to the stake, and to support the others loosely with matting. The branches of Rose trees like a free circulation of air. Allow them as much freedom as you can.—W. F. RADCLIFFE.

HARBY QUICK-GROWING DARK ROSES (*Amateur, Killochan*).—The best are *Duc de Cazes*, *Prince Camille de Rohan*, *Fruicoose Mathilde*, not full but handsome; *Eupereur de Marco*, *Pierre Notting*, and *Vicomte Vigier*. These on the *Manetti* stock, lightly cultivated, would climb to 6 or 7 feet. If a very lofty dark pole Rose is wanted, *Frederick II.*, *summer Rose*, not full but free-flowering and handsome, would do. The others are Hybrid Perpetual and good.—W. F. RADCLIFFE.

CLIMBING ROSES FOR NORTH-EAST WALL (*Marett*).—The best twelve climbing Roses, with variety of colour, for a north-east aspect, well sheltered, are *Baronne Prevost*, rose; *Général Jacqueminot*, scarlet crimson; *Madame Louise Carique*, rose crimson; *Gloire de Dijon*, orange yellow; *Sir J. Paxton*, cherry crimson; *Céline Forestier*, yellow; *Jules Margottin*, bright crimson; *Anna Alexieff*, rose; *Duc de Cazes*, dark crimson; *Duchesse de Medina Cœli*, rich purplish crimson; *William Griffiths*, salmon rose; and *Maurice Beruardin*, vermillion. If a white Rose is wanted, *Acadiale*, *Marguerite Bonnet*, or *Madame Alfred de Rougemont* would do. If a blush one is needed, I recommend *Marguerite de St. Amand*, one of the best new Roses of later years. If more than these are wanted, I recommend *Madame C. Crapet*, *Madame Clemence Jougneaux*, and *La Ville de St. Denis*.—W. F. RADCLIFFE.

PIT FOR WINTERING PLANTS (Q. R. S.).—For a span-roofed pit, it is best to hinge the sashes on brackets, easily taken off and on for cleaning the glass. A lean-to may be done the same way, and the sashes may be held up by pointed sticks when watering, &c.; but it is often better in a common pit to have them to slide, as then they are easily moved to be cleaned, but if you prefer hinging, do so.

PRIZE FOR SIX PLANTS IN FLOWER (J. A.).—It is quite certain that more than one separate *Lilium*, *Amaryllid*, or *Achimenes* could not be shown for this prize if the exhibitor intended the pot containing them to be counted as only one. If the pot originally contained only one *Achimenes* or other plant, and was filled merely by its unseparated offsets, it would be entitled to be counted as a single plant. *Vallota purpurea* may be exhibited as a greenhouse plant.

PROPAGATING DRACENAS AND PANDANUSES (J. Baker).—You may cut down your *DRACENAS* as you propose, and put the tops in as cuttings. They will root freely if placed in a brisk bottom heat, and kept close, moist, and shaded. You will best succeed with the *Pandanuses* by taking off the side branches or suckers, and putting them in as cuttings in a brisk bottom heat, with a close, moist atmosphere, and shade until rooted. The beginning of March is a good time to put in the cuttings, but you may do it now if you have heat. A bottom heat of from 75° to 80° is necessary, together with a corresponding top heat.

WEIGHT OF WOOD (B. C.).—It is quite impossible for us to tell how many cubic feet of "green or newly-cut" wood would weigh a ton, so much depends upon the age of the tree and the season. We can only tell you the weight of a cubic foot when dry of the woods you name. A cubic foot of Beech weighs, 45 lbs. 4 ozs.; of Ash, 47 lbs. 8 ozs.; and of Spruce, 39 lbs. From these data you may approximate to the information you seek.

RE-ARRANGING A GARDEN (Cornubia).—We agree with your general proposed plans, but we are doubtful if the lawn-ground to the south slopes from the house, or to the house. At any rate, we presume that the bank at the south boundary, and beneath which the orchard is to be placed, is 3 feet higher than the basin-lawn. If the lawn slopes to the south, then it would be more artistic if that length of 150 feet were made into two slopes instead of one, though that is a matter of taste. We approve of the sloping bank on the east and west sides of the enlarged lawn; but we cannot say that we approve of the proposed shape of this lawn, bringing the two sides into a sharp angle near the centre, and making the walk on each side correspond, forming thus an unseemly angle of gravel without any definite purpose or object. If the lawn were not to be square, or the sides to be uniform with the house, it would be better if the two sides formed an easy graceful curve without any sharp angle. These side walks or roads we presume would be necessary, but the less they are seen from the windows the better, as gravel in itself is no attraction to the eye, and is only tolerated on account of its utility. As to the joining these side walks at the southern boundary or bank, three courses are available—either bring the walk inside of the bank, or take it outside on the orchard-part of the ground, or if the walk on the top of the mound would be an eyesore and interfere at all with the fine distant view, then bring it in a tunnel underneath the bank. The entrances to this tunnel would be good places for collections of rock plants and hardy Ferns. With your sloping banks on each side of the lawn, and the lawn kept neatly, it will be an advantage, that though these walks are made for convenience, they shall be seen as little as possible from the windows. The moving of the fruit trees so as to increase the lawn is a good idea, but keep in mind that a lawn is even more expensive to keep than flower-beds. With your sloping shrubberies, &c., we approve of having but few trees on your lawn. As to drooping hardy plants, few things will be better than the Weeping Ash, the Weeping Willow, and Weeping Cytisus; and for ornament, what can surpass the Deodar Cedar, the Arancaria, and the Pine tribe with which you are conversant—say, such as *Picea pinsapo* and *Picea obovata*. A large vase or two, or baskets, would look better than beds on such a lawn, and these might be combined in a pretty group to your proposed sundial in the centre. It is impossible for any one to give more definite directions about altering a place without seeing it, and taking all the attendant matters into consideration, and for a work of this extent, if at all doubtful as to how to proceed, it would be well to have the advice of a professional man.

FLOWER-GARDEN PLANTING (Y. Z., Devon).—Suppose you plant your central oval bed thus—1, *Centro Gladioli* and *Salvia fulgens* mixed; 2, *Perilla nankinensis*; 3, *Calceolaria amplexicaulis*, or *Aurantiaciflora*; 4, *Christine Pelargonium*; 5, *Purple King Verbena*; 6, *Königsmaritim*; then the two side circles we would make alike, as 1, *Scarlet Pelargonium*; 2, *Madame Vaucher*; 3, *Iresine Herbistii*, which should do exceedingly well in Devon; 4, light-coloured *Heliotrope* or white *Verbena*; 5, *Little David*, *Harry Hieover*, or *Harkaway Pelargonium*. Then your other two fan-beds we would just transpose, placing *Verbenas* where the *Calceolarias* were last year, and *vice-versa*.

TURFING CROQUET LAWN (P. S.).—After you have trenched the ground as you propose, the old turf being turned in, you must allow the ground to lie some time before turning, so that it may settle, otherwise it will settle into holes. We should prefer trenching now and leaving the ground rough until February, or early in March, by which time it would have sunk. Then, during a dry time, we would make it quite level and firm, and lay down the best turf we could procure. This will be better than sowing grass seeds, as you will have the benefit of the ground almost at once, for after it has been well beaten and rolled you can use it; but if you were to sow it with grass seeds it would not be fit to use the same year. If you give a liberal top-dressing of rich compost over the newly-laid turf, and early in April rake it, and sow over it 4 lbs. per acre of *Cynosurus cristatus*; 4 lbs. *Festuca duriuscula*; 2 lbs. *Poa nemoralis*; 4 lbs. *Festuca tenuifolia*; 2 lbs. *Trifolium repens*; and 4 lbs. *Trifolium minus*, rolling well after sowing, and then leaving the ground untouched for six weeks, we think you will find a good thick bottom will be formed. You cannot roll it too often, nor be over careful in laying the turf, as a little extra care taken at first will save much labour afterwards. Do not mow in too closely the first season, nor, indeed, at any time during dry weather should croquet lawns be cut very bare.

TOP-DRESSING STRAWBERRY-BEDS (J. T. C.).—You should at once place manure upon the vacant space between the plants and rows. Good well-rotted manure is best. The plants will most likely bear fruit next year; but we think from their age that the fruit will be small.

PROPAGATING EUCENTIA CUNI (E. S. C.).—*Eugenia cuni* is propagated by cuttings of the half-ripened wood. The points of the young shoots should be taken off when the wood has become somewhat firm about 3 inches from the end of the shoot, or in the condition known to gardeners as half-ripe. The cuttings should be about 3 inches long, and should be cut across below the lowest leaf with a sharp knife, and have the leaves removed half way up the cutting. They may then be inserted round the sides of a six-inch pot, half filled with crocks, and then filled to within an inch of the rim with a compost of two-thirds sandy peat, one-third loam, adding and incorporating as much silver sand as will amount to one-fourth of the whole. The pot should be filled to the rim with silver sand, and the cuttings put in up to their remaining leaves. The cutting-pot should be inserted in one of larger size, and the interval between the pots should be filled with small pieces of broken pots to within an inch of the rims of both pots, which should be on the same level, and that inch should then be filled up with silver sand. A gentle watering may then be given, and a bell-glass be placed over the cuttings, so that it may rest on the sand between the rims of the pots. The pots may then be placed in a mild hotbed of from 70° to 75°, or in any house where there is a gentle heat. Shade the cuttings from sun, and tilt the bell-glass a little on one side at night. Care should be taken not to over-water, but the sand ought to be kept moist. When the cuttings begin to grow the bell glass should be gradually raised, and by degrees removed, and the shading must be lessened and gradually removed, in proportion

as the plants or cuttings endure the sun's rays without flagging. When well rooted the plants should be potted off. You may also propagate by layers. A vigorous shoot layered in a small pot in spring will be well rooted by autumn.

WINTERING CHRYSANTHEMUMS AND FUCHSIAS (A. Q.).—You may winter Fuchsias in a cellar if you merely keep them from frost and have the soil dry, so that growth may not take place. The soil, however, should not be so dry as to cause the wood to shrivel. You cannot well keep Chrysanthemums in a cellar, as they grow more or less during the winter. They are best wintered in a cold frame, or they will succeed out-doors in any sheltered situation if turned out of the pots, or if the pots are plunged to the rim in coal ashes. The protection of a mat or other covering must be afforded during very severe weather.

GRAPES IN ORCHARD-HOUSE (Idem).—The Esperione is a few days in advance of the Black Hamburgh in ripening in a cold orchard-house where no fire heat is used. The Early White Malvasia is the earliest Grape you can have. Foster's White Seedling is a much better Grape, and the Royal Muscadine is also good.

EVERGREENS IN POTS FOR PLUNOINO IN A BED (A Practiser).—You could not have anything better than compact bushes of *Laurustinus*, which flowers during winter if the weather is mild. Moderate-sized plants of *Cupressus Lawsoniana* look well; also *Thuopsis borealis*, *Arbutus*, *Box*, and gold and silver variegated Hollies. Any of the above will suit you.

PEACH TREES UNHEALTHY (Idem).—Your trees having rank wood at the upper part are probably indifferently trained. You should cut out the weak shoots and branches, and fill their places by depressing the vigorous branches and shoots. This will to a great extent overcome the deficiency of healthy wood at the bottom; but if your trees are for the most part over-luxuriant, you may now take them up carefully, if not very old, and replant, after cutting away any long roots that go straight down by the wall or under the stem of the tree, adding some fresh soil, turfy rather strong loam being best. Too much soil cannot be retained about the roots in the lifting, nor can the fibres or small roots be too carefully preserved. Now is a good time to lift Peach trees. Keep the roots near the surface, avoiding deep planting, and do not cover them with more than 6 inches of soil. If the stems of the trees are slightly raised, and they appear as if on a cone or small mound, all the better. Match around the stems, as far as the roots extend, with 2 or 3 inches of littery manure.

WIREWORM IN TURF FOR VINE-BORDER (E. S. C.).—In turning your sods over you may sprinkle fresh soil over each layer of turf as it is turned, and that will drive them away to a great extent. We are now making several new Vine borders, and we find the wireworm does not like the materials of which the border is composed—namely, turf from a pasture where the soil is of a rather light gravelly nature, six parts; lime rubbish from an old building, two parts; calcined oyster shells, marl, lump charcoal, and broken or bruised bones in equal quantities, two parts. The insects in the turf are making their way to the pathway, evidently unable to live in the mixture, which we find the best of anything we have tried for Vine borders.—G. A.

WHITE CLEMATIS TO FLOWER IN JULY (Boppo).—*Clematis Helena* is not of the *Clematis montana* race, and it does not flower so early. It will probably suit you; but you will find it difficult to bloom Clematises at one time, and especially at the same time as *C. Jackmanni*.

MAGNOLIA TRIPETALA (Idem).—It does not generally bloom until May, continuing till June, and we do not remember having seen it in flower so early as the middle of April; but it may occasionally bloom in April in warm situations. It is a free-blooming tree but requires to be of a good size and age to bloom well.

CLIMBING PLANTS WITH ORNAMENTAL FOLIAGE (—).—*Vitis vinifera* variegata, having every appearance of a weak-growing Vine, but with leaves beautifully marked with silvery and pink variegation on a green ground, is the only really good variegated climber for outdoor work. There is, however, a very promising golden or yellow-leaved variety of the Sweet Jasmine (*Jasminum officinale foliis aureis*), that may prove good. It is as yet very scarce. The best variegated climbers for outdoor trellises will be found among the Ivies. Three good varieties are *Hedera helix chrysophylla*, which has some of the leaves green, others yellow, and some blotched with yellow; *Hedera helix argentea rubra*, with white stripes on the leaves, which in winter are margined and veined with red; and *H. helix maculata*, which has leaves enormously marked, veined, and spotted with white. Three good flowering climbers for a trellis are *Aristolochia sipho*, *Clematis lanuginosa*, or *C. Jackmanni*, and *Jasminum officinale grandiflorum*.—G. A.

CAMELLIA FLOWER-BUDS FALLING (H. W.).—The buds enclosed exhibited those appearances which we find result from an inactive state of the roots. The evil may be caused by imperfect drainage, and most likely by the buds being more numerous than the roots can support. Were you now to thin them considerably we think those left might yet expand.

ALPINE PLANTS (Ackworth Younker).—By the term alpine, as applied to plants, is meant plants that grow in mountainous tracts, where there is generally a great diversity of formation, in some places little beyond rocks. When we ascend to regions that, from their altitude, are difficult of access, we may be said to be in alpine situations, and plants coming from such are called alpine plants. By a common English plant becoming trailing in alpine situations, we should understand one which, though erect and strong in warm deep soil, assumes a trailing habit when grown in colder and more elevated positions.

SCARBOROUGH LILY (Idem).—The proper name of the Scarborough Lily is *Yallota purpurea*.

VINES MILDEWED (A Subscriber).—Sulphur applied to the hot-water pipes when heated to a temperature of 170 ought to have given off fumes that would check mildew; but we fear you did not continue the painting of the pipes long enough, nor cover a sufficient extent of them to completely fill the house with the sulphur fumes, otherwise we know these will destroy mildew. The best remedy, however, is to dust with the sulphur the leaves and parts affected. This will effectually destroy the mildew. You must not burn sulphur in the houses this winter, as that will destroy all vegetable life; but you may paint the Vines with a composition of flowers of sulphur, 1 lb.; ground tobacco, 1 lb.; soft soap, 8 ozs.; unslacked lime, 1 lb. Dissolve and mix in a gallon of water, and,

if necessary, add clay to bring the whole to the consistence of thin paint. The house walls should be well lime-washed, 1 lb. of flowers of sulphur being added to every gallon of the limewash. The woodwork should be thoroughly washed with soft soap and water, taking care not to wet the glass with the soapy water.

GRAFTING MRS. POLLOCK PELARGONIUM (C. H.).—The best time to graft such Pelargoniums is in February and March, or later in the season. We consider Royal Dwarf a good stock for grafting upon, but Tom Thumb or any of the not very thick-stemmed kinds will answer. The best mode that we have tried is side-grafting, which you will find fully described in the "Science and Practice of Gardening." It is necessary to plunge in a mild hotbed, and to keep the house moist and shaded until the scions have taken.

CHERRY STOCKS FOR APPLES OR PEARS (J. A.).—We are certain the grafts would not live.

TOP-DRESSING VINE BORDERS (Idem).—So far from depreciating the top-dressing of Vine borders, we frequently recommend it; but we do not advise top-dressing them in summer, for we know that heavy coatings of manure exclude sun, heat, and air from the border, and tend to bury the roots too deeply. Covering the borders in autumn with 6 inches of half-decayed stable manure must enrich the soil, and tend to protect the roots from cold; but the utility of forking in 6 inches of manure every autumn we cannot understand. The only good that could result from doing so would be the enrichment of the border; but in time the surface would be converted into a heavy soapy mass. We use for top-dressing Vine borders half-inch bones, lime rubbish from an old building, turf from a pasture not more than 14 to 2 inches thick, charcoal, calcined oyster shells, and sheep's-dung or horse-droppings, preference being given to the former. We first place a layer of sods, grass side downwards, and having the whole of the other ingredients well mixed together and in equal quantities, we put on another layer of sods and then a layer of the above substances equal to the thickness of sods, another layer of sods, and so on, until we have a heap equal to our requirements for one season's top-dressing. We give a good soaking of liquid manure to the heap every month, from April to September, the heap being made in March. In October the heap is cut down from one end and the whole chopped up into pieces about 2 inches square and thoroughly mixed. We then put it on the Vine borders from one to three inches thick, having previously gone over the border with a fork, so as to loosen the surface. The difference in the thickness of the top-dressing is owing to the difference in the vigour of the Vines. We give a thicker dressing to those that are weak in growth than to those which are strong. This top-dressing we never remove; it disappears, at least the roots come up into it. Our borders are from 2 feet 6 inches to 3 feet in depth. We cover outside Vine borders in winter with boards to keep them dry.

WINTERING CALADIUMS (P. J. N.).—Caladiums should be wintered in a house with a minimum temperature of from 66° to 65°, and the soil should be kept dry, but not too dry, as that is apt to cause the roots to rot upon their coming in contact with moisture. If you can place the pots on a moist bottom they will absorb enough moisture; but failing this you should sprinkle two or three times a-week with water, so as to make the surface of the soil and the pots moist.

DOUBLE PURPLE LARKSPUR (Idem).—We think from your description that your plant is the Delphinium cheilanthum (Don), var. multiplex. You do not say whether your plant has a large lip, the characteristic of the species. It is a tall-growing kind, and succeeds in good, rich, rather light

soil in an open situation. It should have a top-dressing of leaf mould in autumn, and is increased by parting the roots in spring.

VALLOTA PURPUREA CULTURE (A. J. T.).—The flower and leaf enclosed to us are those of Vallota purpurea. Its treatment is that of a greenhouse plant, succeeding in a compost of rather strong loam and one-third peat, with the addition of a little leaf mould. The plant should be kept rather dry during the winter, but when growing cannot have too much water, and should receive every encouragement. When a good growth has been made expose it fully to light and air, and diminish the supply of water. The foliage must not at any time be allowed to flag.

WINTERING FUCHSIAS (Idem).—Your old plants may be wintered in the potting-shed as usual, but the autumn-struck cuttings ought to be kept upon a shelf in the greenhouse, and the soil not allowed to become very dry. If you manage them well they will continue growing more or less throughout the winter, and by frequently shifting in spring you may have them very fine next year. Old plants do not generally make good specimens.

PROPAGATING CORREAS, ACACIAS, AND CYTISUS (Idem).—Correas and Acacias are increased by cuttings, and the points of the shoots when the wood becomes a little hardened at its base should be taken—about 3 inches of the moderately vigorous shoots. The foliage should be removed from the cuttings for half their length from the bottom, and the base of each should be cut transversely below the lowest joint with a sharp knife. They should then be inserted in a pot half full of crocks, filled to within an inch of the rim with a compost of sandy peat two-thirds and one-third sandy loam and silver sand, and then to the rim with silver sand. The cuttings should be inserted round the sides of the pot and up to the leaves in the sand. Give a gentle watering and place the pots in a house with a gentle heat, covering the cuttings with a bell-glass. A slight bottom heat will facilitate rooting. Shade should be given from sun, and the atmosphere must be moist, the cuttings not being allowed to flag from the dryness of the soil, and the latter must not be made sour from constant watering. The Cytisus may be increased from cuttings as above described. May and June are a good time to put them in.

STAR PINKS (E. D.).—We do not know what they are. The more circular the flower of the Pink the better. A starry flower is not admissible.

VINES AND PEACHES (A. M. G.).—A house 7 feet wide is of sufficient width for growing Vines and Peaches.

NAMES OF FRUITS (William Thompson).—1, Brown Beuré; 3, Monarch; 5, Thompson's (or Viesembeck). Are you sure the Beuré Del you sent is correct? It is very like Beuré Superfin, an excellent Pear when in condition, but keeping for no time. Beuré Del ought not to be a mass of corruption at this season, as this specimen is. We do not recognise the other two Pears. (Elizabeth S.).—1, Alfriston; 2, Minchall Crab; 3, New Hawthornden; 4, Dumelow's Seedling; 5, Hampshire Pippin; 6, Fearo's Pippin. (W. Williams).—1, Glou Moreau; 2, White Doyenné; 3, Nouveau Poiteau; 4, Uvedale's St. Germain; 5, Fondante des Bois; 6, Shobden Court; 7, Broompark; 8, Winter Nelis; 9, Old Colmar; 10, Monarch; 11, Ne Plus Meuris; 12, Doyenné Boussoch. (J. Watson).—1, Monarch; 2, Baronne de Mello; 4, Whitmore Pippin; 5, Scarlet Nonpareil. (Osborn).—We paid eightpence for your box of Apples and Pears. If you enclose to us eight postage stamps the fruit shall be examined.

NAMES OF PLANTS (C. F.).—Scutellaria serrata. (A. E.).—1, Pteris cretica albo-lineata; 3, Selaginella Martensii; 4, Adiantum formosum; 5, Pteris serrulata; 6, Lastrea Filix-mas; 9, Asplenium adiantum-nigrum 2, 7, 8, being without fructification, cannot be named.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending October 29th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 23	30.044	29.859	63	46	55	53	S.E.	.00	Overcast and damp; clear and very fine; overcast.
Thurs. 24	29.942	29.785	61	41	55	53	S.E.	.00	Overcast, very mild; very fine; clear, low fog.
Fri. . 25	30.130	30.085	62	34	55	53	E.	.00	Overcast; fine; cloudy and fine at night.
Sat. . 26	30.082	29.938	62	45	54	53	S.	.00	Clear, low fog; clear and fine; clear.
Sun. . 27	29.502	29.351	51	29	53	52	N.W.	.17	Overcast, boisterous; heavy rain; clear and cold.
Mon. . 28	29.942	29.762	55	30	51	51	N.W.	.02	Clear, hoar frost; clear and fine; clear.
Tues. . 29	29.999	29.738	55	47	51	51	S.W.	.01	Rain, cloudy and boisterous; cloudy; overcast.
Mean	29.949	29.788	58.43	38.86	53.43	52.29	..	0.20	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

DEFICIENT TIME FOR JUDGING POULTRY.

As poultry shows seem just now to be setting in thick and furions, perhaps you will allow me space for a few remarks that may prove of general utility, for in my opinion they are of equal import whether as referring to the exhibitors themselves, the committees of management, or, though last, not least, the judges. In fact, as the interests of all are strictly identical, it is most probable each of these three parties will find their individual participations so perfectly blended as to at once lend a willing hand towards the correction of an abuse that step by step has crept in, equally hostile to the satisfaction of the whole.

The feature I particularly refer to is the insufficient time allowed for judging even by the first arrangements, and still more so by the unscrupulous after-deductions from that time which so frequently are made to suit contingencies.

As an instance—such cases, by-the-by, are not isolated, but continually occurring—poultry shows being by the rules as printed on the prize schedules advertised to open to the public at a specified hour, engagements are then entered into with one or more arbitrators, by which it is hoped all the awards will be made prior to the time stated for admission; whilst the affixing of the prize cards, combined with the corrections for the printed catalogue, are, when thoroughly pressed for time, found to be by all parties concerned no trifling addition to duties which at the outset were undoubtedly the very opposite of a sinecure. If this were all there would be but little of which to complain; but the truth is, the honorary secretary's official letter of engagement stipulates that, "all will be ready by such an hour, and that the judges will be able to commence their duties as soon as they please afterwards."

On the face of such a proposition everything seems to foretell a perfect balcyon time—hurry and abridgement appear next to impossibilities. The arrangements are finally concluded, and when the judges meet at their appointed hostelry the previous evening personal congratulations are rife that

"they shall get done easily." The morning, however, brings with it the most abrupt evidence of the delusiveness of such foregone conclusions. A very early breakfast being hurriedly partaken of, the arbitrators on their arrival at the exhibition find, and that as the first intimation, "that the committee cannot possibly be ready for an hour and a half or two hours to come." The grounds of delay, of course, are various—sometimes from the pens not arriving in time, or that workmen failed in their duties; and again, far more frequently, because the committee feel it incumbent on them to wait the arrival of some particular individual's birds, that very probably "will come" by a train arriving at the hour, perchance about midway between the time first named for commencing the arbitrations and that of the opening to visitors. By this last defect, not very long since, I was myself, when single-handed, delayed five and a half hours during good daylight—taking short walks in the immediate locality—and consequently had to avail myself of the so-commonly-called-in an "assistant" at such cases, a policeman's bull's-eye lantern, for some four or five hours after daylight was gone.

In this particular case, as in a variety of others that could be mentioned, in which I had colleagues however, the expected fowls never came at all; though, on the other hand, not unfrequently such anticipations of the committees have been eventually fulfilled. But can it reasonably be supposed, even if want of daylight does not ensue from these changed arrangements, that the awards can be made as coolly, or the general examination of the birds be as perfect and satisfactory as would have been the case had the deducted one, two, or even three hours been made also available?

On this point I am well assured all your readers will arrive at much the same opinions; but my mind embraces from practical experience another and quite as potent an objection—viz., it cannot be logically argued that to wait at all for "late comers" is doing justice to those who have at much inconvenience obeyed rules. Again, through so common and mistaken a piece of kindness by committees, the result of the present deference to late arrivals has brought with it one unvarying sequence—the "whippers-in" have only taken advantage of this former indifference to regulations, and the next year have put in their appearance even at a later hour than before.

Another little hint may not be without its usefulness. The fast-coming short days, combined with "classes for chickens of the present year only," add most materially to the attendant difficulties of such hurried arbitrations; for it cannot be denied that those exhibitors are not mythes, who will, if they can, introduce into their pens both cockerels and pullets of very questionable age, and for judges during the last couple of months of the year, to, at a first glance, determine the question of age, in perfectly matured early chickens, is more than can be fairly expected. Experience, too, proves (as I have before expressed myself in print), that the man, of all men the most ready to solemnly protest to the age of his pen of chickens, will usually be found to be the individual who first sealed his conscience by a false entry of their juvenility. In the case of "disqualification" on this particular point, it must also be borne in mind, the odds of advantage are always against the judges, who, of course, can only speak as a matter of individual opinion in respect to closely-disputed age; whilst a home-diary, or a home domestic, if wanted, is but rarely absent on behalf of the questioned birds. It comes, in fact, even at the present moment, within the scope of my knowledge, that several amateurs have chickens just hatched, and eggs still to come. Some of them say, "The rearing of a few chickens in the winter affords them occupation; it is pleasurable to them, and they would not, on any account, be without them." How fearfully adverse are my own experiences as to this "pleasurable occupation!" I have invariably found such chickens prove far more troublesome than profitable, whilst my domestics in years past, when rearing winter Sebrights, with the view to keep them dwarfed, unanimously voted them "the very worst of all little plagues."

My individual impression is soon told, if prizes for chicken-classes were not offered during the last two months of the year, the now general inducement to enter very ancient-looking, winter-hatched chickens, would not be nearly so extended; and at the advanced period of the season I have named, such chickens may usually be expected to hold good place against all comers, as birds of nine or ten months old are generally found to be in their very best trim for competition.

Of course, no breach of agreement as to the time of opening, can be tolerated by an impatient public; for in such case, a

perfect storm of loud knockings at the doors challenges instant admission; and should it then happen that the prize-cards are not in their places, or the catalogues, with the awards, are at the moment not forthcoming, complaints, couched in not the most pleasing language, are, as the rule, far more abundant than welcome.

It is also very easy to conceive, that when the awards are made at the rate of a hundred pens an hour, it is a sufficiently heavy strain, both on the brain and body of the judges, during a couple or three consecutive hours, without any unnecessary impediments being placed before them; nor can it be doubted, that an amateur, who, at his own leisure (say, of even the whole afternoon, if he pleases to so devote the time), can most probably see some little defect or other, that possibly may have escaped the hastier glance of the most experienced arbitrator.

Before I conclude, I may just mention the indisputable fact that though a judge may carry on pretty comfortably at the rate named for some three hundred pens or so, if the entries should prove double that amount, he is not at all in the same position for the fulfilment of the afterpart of his duties as he was at the beginning of those classes adjudicated upon. To limit, therefore, the originally defined time for the arbitrators, becomes at once suicidal to the best interests of the exhibition; exposes the judges to complaints that would not otherwise arise, and as undoubtedly causes many an unnecessary contention among even the competitors themselves.

For each society to carry out rigidly the rules as to the time the poultry is to be received at the show, irrespective altogether of the social position of the various competitors, is equally a duty of the managing committee as on their part to be also quite prepared with the exhibition-coops for the reception of the poultry on their due arrival. The time agreed upon in the first instance as to be fully allowed should be punctiliously observed when the judges are officiating; and this really done, if the allotment of the premiums should prove unsatisfactory, then by all means in future years exchange your arbitrators as being inefficient; but do not, on the contrary, expect from the parties thus judging the evidently impossible task of carefully making their decisions that under the original covenant were to have occupied half a dozen hours, just as accurately as they would have hoped to have done had not the altered arrangement so unceremoniously curtailed the time to not half that period. In short, I do maintain that the judges of a poultry show are as perfectly entitled to the whole time appointed for the sufficient discharge of their onerous duties as are the competitors themselves to the prizes when awarded to them, or the committee to the admission money received at the entrances to the show.—EDWARD HEWITT, *Sparkbrook, near Birmingham.*

[The complaint thus uttered by Mr. Hewitt will be sustained by every one interested in poultry exhibitions; and the committees will not merely act wisely but justly if they avoid the evils and injustice he points out, and which the committees do not sufficiently appreciate. A judge would be quite justified in refusing to make awards unless he had the full time originally specified.—Eus.]

BEST TIMES FOR REARING CHICKENS.

I WROTE to you in July last about rearing chickens, giving an account of the benefit they derived from a change of food and water. With all my attention, however, I was not very successful during warm weather, and I find I can rear chickens with less attention and more success in March and April, and again in October, than I can any time from May day to Michaelmas. I am so convinced of this fact, that I shall in future try to have all my chickens hatched before the 1st of May.—A. R. L.

[We agree with you fully, and we have always so far as we could followed the plan. We hatch all we can in March and April, but we cannot hatch all, and we run into May. We suffer little by so doing, but we never do well in June. We believe that the great heat of the sun is not good for them. The earth also is dry and parched, yielding neither food nor refreshment. Old henwives attribute the constant failure of success in June to the haymaking, a sort of hay-fever. It has passed into verse thus—

"Chicks that be hatched when there's making of hay,
Will never do well, but will fade away."]

POLLEN OR FLOUR?

Will you inform "T. H." that I observed similar pollen carried in by my bees on the 13th of October. My apiary is near to a village, and it occurred to me that they had obtained access to some granary. The "white powder" was only brought in by the bees of one hive, and I know of no kind of flowers in my neighbourhood that they could collect it from.—J. C. A., North Cheshire.

[With regard to the bees covered with white pollen, mentioned in page 306 of "our Journal," I believe it to be flour from the corn mills. I have recently seen many of mine come home from the direction of a mill, and have noticed it in former seasons.—C. F. G., Lincolnshire.]

BEES DESERTING THEIR HIVES—BROOD REMAINING UNDEVELOPED.

SOME time since Mr. S. Bevan Fox and myself made similar inquiries regarding stocks deserting their hives during the spring; but with all deference to the Editors, who have stated in reply to several inquiries that want is the chief cause, I beg to differ from them on that point. Although I have had many desertions, I have never had one from that cause, but, on the contrary, the hives were always well-stored with food. It would seem, therefore, that we must look for some other cause, which can only be discovered by patient observations. I will not, then, venture to lay down any positive rule, but will content myself with mentioning under what circumstances I have had cases of this kind. Before doing so, however, I may call the reader's attention to the question which I put in No. 303 of "our Journal," respecting bees failing to hatch out their brood, and which it was suggested by a "DEVONSHIRE BEE-KEEPER" might be one of the phases of foul brood. Well would it be if it were so, as the bees would then have found a cure in themselves; and although the hive itself would not be benefited by it, still it would prevent the infection from spreading. It may be remembered that I mentioned that at the time of the queen's impregnation the temperature was low, not more than 65° in the sun, and rather a chilly day. Notwithstanding she had had a successful marriage flight, it is evident that a higher temperature is necessary to impregnation, for this queen probably would have remained a drone-breeder, although of this I am not certain, as I never minutely examined the larvæ, and none was ever hatched, being always destroyed when in the larva state whilst the bees deserted their hive in the spring. Now it has happened with me that late-bred queens are never so prolific as those hatched or fertilised in the heat of summer; neither are they so long lived, either deserting their hives or meeting with an untimely end by their subjects. And, again, all stocks which have been subjected to severe cold have either quit their hives, or their queen has died from dropsy.*

I may mention that there is also a desertion by swarms after being lived, and which has been rather common this year. This kind of desertion arises, undoubtedly, from a scarcity of food at swarming time. Any person at all acquainted with bees can easily determine whether there is any danger of their leaving after swarming, simply by observing whether they have empty or full stomachs; if the former, feeding ought to be resorted to at once—a precaution which I have never found to fail in attaching them to their hive. If honey is scarce feeding ought to be continued, as they will sometimes leave after making a good deal of comb.

One or two rather singular anomalies have come under my observation this season—viz., many drones belonging to a hive which in May was bringing forward young queens, deserted it, and tried to gain admission into another, where most of them were killed. Piping was in several cases heard where the old queen was still regnant and afterwards came off with the first swarm. I have also met with another singular occurrence. A large piece of drone comb was filled with worker brood, which all hatched. Another hive that was raising queens commenced four royal cells. One was completed and hatched, another was destroyed on the ninth day, and, strange to say, the bees that cleaned out the cell died. The other two cells were widened but not lengthened, having the ordinary sealing, and their tenants were not ready to hatch until the twenty-first day; but

* I dissected a queen that died from dropsy, probably caused by severe cold, and found her spermatheca entirely dried up, her ovaries were wasted away, and the remaining matter had the appearance of that evacuated by hens when suffering from inflammation.—A LANARKSHIRE BEE-KEEPER.

I could find no difference in them from the ordinary workers, although it occurred to me that if they possessed anything, however little, of the nature of the queen, such bees might be the cause of regicidal attacks on a young queen after her marriage. Supposing them to be eight days later in hatching, answering to about the time of her wedding flights, they may probably emerge from their cells about her time of leaving, and be ready for combat on her return.—A LANARKSHIRE BEE-KEEPER.

OUR LETTER BOX.

WEIGHT OF FOOD NEEDED (A. B.).—It is impossible to answer your question exactly. According to our calculation, with the advantages they have, a bushel of barley should last twenty fowls from thirty-two to thirty-four days.

DEAF-EARS OF WHITE DORKINGS (Amateur).—It is an important point, but most have some white on the deaf-ear. Many consider it a characteristic of the breed. We do not.

CHARACTERISTICS OF A DARK BRAHMA COCKEREL (Brahma).—A dark Brahma cock should have a light hackle and saddle, black tail, spotted breast, black thighs, pea-comb, and yellow, well-feathered legs. Black breasts are not disqualifications. The breast of a perfect bird should be distinctly black and white. Light breasts with lighter spots are very objectionable. Light thighs are also the reverse of desirable. The comb should be firm on the head.

BLANCHING COCKS' COMBS (Pop).—They make an excellent dish. The combs are to be cut off after killing. They are rendered white by being scalded and then skinned.

MATING A LARGE LOPE-EARED RABBIT (B.).—For table purposes you will find no cross so good as the Belgian Hare Rabbit. It gives very great weight and is essentially fit for the food question. Your Dorking cocks have probably grown too fast and become weak. You must feed them generously, and put some sulphate of iron in their water.

FEEDING YOUNG GOLDFINCHES (T. F. G.).—When it is desired to raise Goldfinches by hand, they should be taken from the nest when about half fledged. The older, however, the better, always provided they are not too old to open their mouths to be fed, and they may be reared on a paste of sopped bread and maw seed (poppy seed). Some persons use rape seed, but if that is used it should previously be scalded and well washed to deprive it of its pungency; but maw seed is much the better. They require feeding often, and the food should never be given them if at all sour. Some people, to avoid the trouble of feeding by hand, place the nest containing the young birds in a cage and hang it on the tree where found, and leave the old birds to feed their young through the bars of the cage. This plan often succeeds, the young birds being at the same time provided with seed and water for them to peck at if inclined, that they may learn to feed before the old ones forsake them, which, if it is an early brood, the old ones are apt to do in order to breed again. These young ones, though they have never flown at liberty, yet are more shy than nestlings reared by hand; but are tamer than the Greypate branchers caught after they can feed themselves.

SHIFTING HIVES.—[In reply to the query of 'C. A. T.' in reference to what I wrote in No. 252, of this Journal, the distance between the two apiaries is about 30 yards. The old bees do return to their original stance, many of them at least, but never in such numbers as to risk the loss of the stock. It is the safest of all modes of artificial swarming. I can speak positively, having tried a multitude of plans, and having recourse to this method continually. In this case the fact of their going being with them, retains many of the old bees in tranquillity about their till such time as the stock has recovered population by the development of brood. Of course, it is never advisable to adopt this or any mode of artificial swarming where the hives operated upon are weak in population. While I have my pen in hand, let me thank Mr. Fox for his kindly correction of an error in my figures in my last communication. The year 1860 was the bad year, not 1861, which was a remarkably good season for honey in these parts.—B. & W.]

AWARDING PRIZES FOR HONEY IN SUPERS.—"T. B. P." would be obliged by "MINTLYN" informing him to which of the three numbers mentioned in page 247, the judges awarded prizes; also, whether in giving their decision they were guided by the whiteness of the comb, or preferred those which were the best filled and the most completely sealed over.

FLAT OBSERVATORY HIVES (Alfred P.).—These are the worst possible abodes for bees during winter. Indeed, so rarely do they survive, that the attempt to keep bees through the winter in a nuciform hive may practically be considered hopeless. The moisture which you describe has been condensed on the glass, whence it has trickled down to the floor-board. Feeding will only aggravate the evil, and if the bees are confined will speedily produce disease and death. Removing the stock was also a great mistake, as, if they are not confined, nearly every bee that flies out will seek its old stance, and perish from being unable to find its home. The case is, indeed, so desperate, that we see little for it but to leave the bees to their fate. Before again stocking the hive we should have it fitted with moveable comb-bars in the manner invented by Mr. Woodbury. These may be either four or six in number, according to the size of the hive, and when winter again approaches them, with the combs attached to them, should be lifted out, bees and all, and ranged side by side in the usual manner in a box adapted to receive them, which should be put in the place of the observatory hive, so that the bees may have no difficulty in finding it. When summer approaches the colony may again be transferred to its transparent domicile, in which it will do well enough so long as the weather remains warm. With regard to the bees in the cottage hive, the case is very different. They will, probably, do well enough if you administer without delay a sufficient supply of food in the manner described by us in page 306.

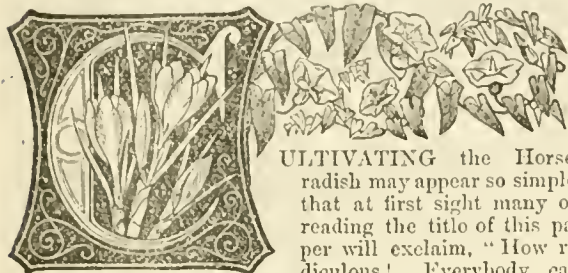
FEEDING BEES (Carolus).—Your estimate of the weight of bees and combs is, probably, somewhat under the mark, but is, practically, quite near enough. Read our reply to "A CONSTANT READER" in page 306, and follow the advice therein given. We know of no trap that would not catch bees as well as wasps.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	NOVEMBER 7—13, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
7	Th	Meeting of Linnean Society, 8 P.M.	62.0	37.1	41.6	19	6	17	23	4	43	2	9	1	11	16	12
8	F	Royal Horticultural Society, Promenade.	60.9	34.9	42.9	18	7	7	20	4	7	3	17	2	12	16	8
9	S	PRINCE OF WALES BORN, 1841.	60.6	33.0	42.2	16	9	7	19	4	34	3	28	3	13	16	4
10	SEN	21 SUNDAY AFTER TRINITY.	60.3	34.1	42.2	22	11	7	17	4	3	4	40	4	14	15	68
11	M	MARTINMAS DAY.	60.3	34.5	42.4	15	13	7	16	4	35	4	54	5	15	15	62
12	Tu		60.3	33.4	41.8	16	14	7	14	4	12	5	9	7	15	45	316
13	W	Day decreased 8 h. 3 m.	49.8	35.4	42.6	21	16	7	13	4	56	5	23	8	17	16	37

From observations taken near London during the last forty years, the average day temperature of the week is 50.6°; and its night temperature 34.8°. The greatest heat was 63°, on the 6th, 1834; and 12th, 1841; and the lowest cold 17°, on the 9th, 1864. The greatest fall of rain was 1.16 inch.

CULTIVATION OF HORSERADISH.



CULTIVATING the Horseradish may appear so simple, that at first sight many on reading the title of this paper will exclaim, "How ridiculous! Everybody can

grow Horseradish. How unwise to waste the space of 'our Journal' with a paper on such a subject." I must, however, crave the patience of my readers, and hope that when they have followed me through this article they will think there is, after all, something in knowing how to grow good Horseradish.

Ten days ago it would have been one of the last things I should have selected for notice, but since that time I have been so impressed with its great usefulness that I at once made up my mind to give the Journal's readers the benefit of what I had seen.

A few evenings ago I met at a friend's house in the neighbourhood of Manchester several horticulturists—one of them a celebrated grower of Grapes and Pines for market, and another an extensive grower, whose mode of cultivating Horseradish I am about to describe. Both of these gentlemen, like my friend the host of the evening, are enthusiasts on all matters pertaining to a garden. After a long chat about gardening matters generally, the subject of the Thompson testimonial was introduced by my friend, who managed this very appropriately by reading a letter of mine which lately appeared in the Journal. No sooner had he finished reading the letter than he gave me a guinea for the testimonial, and the others likewise contributed; so that I considered my evening well spent, for I not only gained the knowledge I am about to impart, but also a small sum for the Thompson testimonial. I should feel well pleased if I had the chance of similarly acquiring knowledge on various other subjects.

Mr. Kelsall is the grower who has produced such remarkable results in the cultivation of Horseradish. It appears that some years ago there lived in the neighbourhood of Stretford a man who was a very successful grower. Mr. Kelsall thinking he could make more out of Horseradish than the person above referred to, offered him a certain sum of money for the secret of how to grow it, and also for his stock of young plants. The bargain was made, and this is the way Mr. Kelsall makes his Horseradish-beds.

Early in the spring, about the beginning of April, the ground is prepared, as I understood, in the following manner:—A ridge of good decomposed manure is placed on the ground, a deep trench is cut out on each side of this ridge, and the soil from the trench is packed on each side of the manure and also on the top. The manure is

thus enclosed between two ridges of soil. The banks when ready for planting have the appearance of well-elevated Asparagus-beds; the higher they are kept above the general level of the ground the better.

The beds having been made as above described, the next proceeding is to prepare the sets. For this purpose Mr. Kelsall uses the long small roots which grow out from the main plant; the longest, straightest, and cleanest of these are selected to form the future giant sticks of Horseradish, and are prepared in the following way:—Take the piece of root in the left-hand, then with the right rub off all the eyes and young fibrous roots, leaving about a quarter or half an inch undisturbed at the largest end of each piece.

Having prepared the sets as described, they are ready for planting, and now comes what appeared to me the most curious part of this mode of cultivation. According to the general practice the pieces to form the future sticks are buried as deeply as possible in the ground; but Mr. Kelsall does quite the reverse, for his sets when placed in the ground are not more than 6 inches below the surface. In planting, a piece of stick is pushed from the top edge of the bed in a slanting direction towards the middle of the bed; the sets are then placed in the holes thus made, but care is taken in performing this operation to place the pieces of root in the holes as straightly as possible. Care must also be taken to place the smallest or right end in the hole first, otherwise the order of things becomes reversed, and the root, or that portion of the piece intended to produce the future roots, will occupy the position of the crown. The piece of root should be pushed in about 2 inches further than the edge of the bed. This is all that will be necessary to be done.

The piece of root, or set, having been planted in this way, it will soon commence forming roots at the base, and these will at once search out the manure which has been placed in the centre of the bed. As soon as they have found it the set will increase in size to an extraordinary extent, and speedily a bud will break out from the other end, which forms the crown of the plant. When leaves appear, reciprocal action between the root and foliage is carried on energetically, and the plant is then matured with great rapidity. Scarcely a single root is formed between the crown and the base of the rootstock. Here there is a cluster of roots which have found their way into the manure, and the straightest and best of these must be saved for making future plantations. The set does not grow any longer after being planted, but increases in thickness to a wonderful extent, and, from the base to the crown, is white and perfectly free from roots.

The preceding is a simple and excellent mode of growing Horseradish. That Mr. Kelsall finds it very profitable there can be no doubt, from the large quantity grown by him in the neighbourhood of Manchester, where there are beds of it by the acre. When specimens of Horseradish, such as that which I send for the Editors' inspection, reach the kitchen, the cook will have much more pleasure and satisfaction in scraping off a portion of one of them than she would from such sticks as we usually see, and which

are covered with knots and small roots, and too often anything but straight, although at the best of times scraping Horseradish is not a pleasant occupation. Then, again, a fine stick of Horseradish like that sent, and which, when I brought it from Manchester, weighed little short of 2 lbs., will, if proper care be taken to keep it moist, last a moderate-sized family a fortnight or three weeks. Besides, how much more pleasant it is to see a crop of Horseradish grown on a compact and tidy bed, which can be kept in order, instead of searching all over a large piece of Horseradish to find a good stick, which sometimes is not found until, perhaps, a dozen or more have been taken up and thrown aside; whilst with the Kelsall bed you may begin at one end, and clear the bed before you. Again, in winter, if severe frost sets in, a bed, or a portion of one, may be covered with litter or leaves; you know where to look for what you want, and can obtain it in five minutes, instead of digging and searching for, perhaps, an hour; or if the ground is frozen very hard, it will be almost impossible to take the roots up. Twelve or twenty-four sticks like that sent would last a large family a long time. At the commencement of winter they might be taken up and stored away in moist sand in the root-shed, and all the ground necessary to grow the twenty-four sticks on would be a bed 9 feet long and 2 feet 6 inches wide.

I think I have shown that it is worth while to grow Horseradish well, and that it may be grown profitably on Mr. Kelsall's plan. Since seeing and having this system of cultivating Horseradish explained to me, the idea has suggested itself to my mind that *Sea-kale* may be grown with great advantage by planting it in precisely the same way on raised beds; for it is obvious that the Horseradish makes a very stout stem in a very short time, as also a splendid large crown. One of the principal causes of its growing to such an enormous size in so short a time is, in my opinion, that its roots are near the surface, where they are more under the influence of the sun-heat and air, instead of being down in the cold subsoil. And in the case of the Horseradish, when the set is placed at a great depth below the surface much time is lost during the formation of the crown and in this reaching the surface. I shall at once have some beds made on Mr. Kelsall's principle, both for *Sea-kale* and Horseradish, and will give your readers my experience at some future time; still I would recommend all who have a kitchen garden to try for themselves his mode of cultivation, and I feel certain they must succeed in both instances. In the case of *Sea-kale*, it offers great facilities for applying liquid manure to the roots. The manure being placed in the centre of the bed, the soil there will be much more open than at the sides; a small portion of the soil, just enough to form two small ridges, may be drawn from the centre between the rows of plants on each side, leaving above the roots a small channel into which the liquid manure may be poured, and it would soak down just where it was wanted among the roots. I have no doubt Mr. Kelsall might even increase the size of his enormous sticks of Horseradish in this way.

I send with the large stick of Horseradish a small piece of root, dressed ready for planting, and one not dressed. The large fully-developed stick was no larger than the small pieces when it was planted as above described in the May of the present year.

I shall send you a few other hints on various subjects suggested during my recent visit to Manchester.—J. WILLS.

[The specimen sent to us is a handsome, perfectly straight stick, 10 inches long and 6 inches in circumference, all serviceable for kitchen use.—EDS.]

THE BICANE, OR CHASSELAS NAPOLÉON GRAPE.

I FRUITED this sort under the name of *Vicane* in 1844 and 1845. I was struck with it at first on account of its vigorous habit, in that respect rivaling or even exceeding that magnificent Grape *Trovcron Frontignan*, and also for the size of its bunches and beauty of its berries, reminding one of the berries of *Pansee Jaune* Grape, which are so tempting and so worthless. Its defects I found to be—1st, Shy bearing, my fine canes giving only two or three bunches, while others standing alongside of them gave eight or ten; and 2ndly, Deficiency of flavour, remarkable in my case because its berries were compared with those delicious kinds the *Early Smyrna* and *Salamon's Frontignans*, which ripened with the *Bicane*. After comparing it with these kinds, and also with *Black Hamburg* in the

same house, it was not thought worthy of cultivation; its juice might be pronounced sweetwater, and that of *Pansee Jaune* mawkish sweetwater. Accordingly my *Bicane* Vines were thrown on the refuse-heap.

I have for many years amused my leisure hours in fruiting in pots a great number of French Grapes selected from the thousands of varieties grown in France. Sometimes I have felt fatigued at my numerous disappointments, but I have been occasionally rewarded by discovering something good, and especially so by receiving from my friend Monsieur Hardy the *Early Smyrna Frontignan* (*Muscat Précoce de Smyrne*, or *Isaker Daisiko*). This most delicious *croquant* Grape ripens on a wall with our *Royal Muscadine*, and is a perfect treasure. M. Hardy sent me at the same time *Muscat de Smyrne*. This is a melting Grape, not quite so early as the preceding, and a most abundant bearer.

Now, on the subject of Grapes, I may I trust be permitted to mention a sort at first lauded even to ridicule, and since proportionately abused—I mean *Ingram's Prolific Muscat*. In my "vineyard under glass" I have a Vine of this kind some 8 feet in height, it is annually covered with fruit from top to toe, the bunches resting on the ground, as fine in colour and flavour as those near the glass. The *Muscat* flavour is rather a myth, but its syrupy richness is most remarkable, and, above all, it ripens freely under glass without fire heat.

I may, perhaps, be allowed to mention that I have fruited three kinds under the name of *Alicante*, one from Belgium and two from France, all black Grapes, and all unworthy of cultivation.—T. R.

VARIEGATION.

THE past season, from whatever cause, seems to have been one more than ordinarily well suited to the production of variegated sports among plants, for though they are far more frequently to be met with at any time than most people who take little interest in the subject imagine, yet it is only when they are developed on cultivated plants that they begin to attract attention.

This year the instances in which they have occurred among Turnips and other green crops have been so numerous, that even farmers, who in general pay little heed to such profitless phenomena, have been led to take notice of them. In one Turnip field of about ten acres, which I sometimes have occasion to go into, there are upwards of twenty, many of them beautiful objects that might hold up their heads in any flower garden for a short time, if the plant were anything else than a Turnip, especially those of the purple-top and white varieties some of which have leaves beautifully and regularly margined with white. In the yellow sorts the variegation oftener assumes the form of spots or splashes of that colour, sometimes one-half of a leaf is entirely yellow, and in one instance about the half of the whole plant was affected as though it had thus far assumed "death's pale uniform."

In no case does this aberrant tendency seem to exercise any influence over the root, either as regards size or colour. If any difference exists the plant may, perhaps, be a little more succulent than its green-leaved neighbours, but it can hardly be said with certainty that such is the case.

Being somewhat curious on this subject, and having frequent opportunities of noticing variegated specimens of wild plants when they occur, I have made a note of those picked up during the summer, which are as follow:—*Lychnis diurna*, yellow-striped; *Potentilla anserina*, imperfect; *Veronica agrestis*, white, very perfect; *Lotus corniculatus*; *Senecio vulgaris*, five specimens; *Polygonum fagopyrum*; *Fragaria alpina*; and *Trifolium repens*, two specimens.

With the exception of *Lotus corniculatus*, all these were found on ground that either was or had been under cultivation; and this I have taken notice of for some years, that these sports are almost entirely confined to kitchen gardens and their neighbourhood, compost heaps, fields under green crops, or similar places that have been richly and recently manured; while on upland grounds and along the seashores, I do not recollect ever having met with a single specimen. This, coupled with the fact that the green parts of plants only partially variegated grow with as much vigour as those of the same kind similarly situated, but not so affected, does not tend to confirm the opinion which has been put forth, that in the first instance variegation is caused by debility induced and propagated by

the absence from the soil of something essential to the health of the plant.

In support of the latter view, it has been stated that double flowers and variegated leaves cannot co-exist on the same plant, the latter being indicative of weakness, the former of over-luxuriance; but this is not strictly correct, for although the combination is not frequent, yet double or semi-double flowers are sometimes found along with variegated leaves, as in the Auchen-leaved Daisy, the blotched-leaved Dahlia, Chrysanthemum Sensation, and possibly in many more plants.

The causes which induce that peculiar arrangement of the particles composing the variegated parts of leaves, and the laws which regulate the action of light upon these particles, thereby investing them with various colours, can only be discovered by penetrating far into the paths of chemistry and optics, regions into which we gardeners have neither time nor call to wander; yet I know that many are nursing the miserable little hope of being one day able to produce variegation at will: hence, the doctoring of plants with chemicals, the maltreating of embryo buds, and other experiments we sometimes hear of; and little surprise need be felt if somebody's "Variegator" "to be introduced into the sap in autumn," should turn up among other business advertisements in the newspapers some day soon.

A Mrs. Pollock Pelargonium or some of Mr. Wills's beautiful gems are all very well, but I hope the day is far distant when any one will be able to conjure up a piccadilly duplicate of each of our favourite flowers. It is bad enough that our native Ferns are almost swamped by an inundation of distorted monstrosities, neither interesting nor ornamental, without seeking further to coax Nature out of her legitimate paths for no end. The variegated plants we already have are amply sufficient for all our hedging wants, they have already lost the charm of novelty, and every additional plant placed on the list, unless something very striking, only tends by so much to make them the more uninteresting.—*AVONSHIRE GARDENER.*

AN OCTOBER AFTERNOON AT BOWOOD, WILTS. THE SEAT OF THE MARQUIS OF LANSDOWNE.

SOME people who have watched the weather for many years say that as a rule there are twenty-one fine days in October. Others declare that St. Luke, whose day is the 18th, has always his little summer. Be these remarks correct or be they not, they encourage our hopes of fine days in October; and this is certain, that dearly we enjoy a bright autumn day. The blood is warmed and the earth warmed by the summer's suns; and although spring has indeed hope to gild it, autumn has the recollections of the past, which throw upon it rays of glory. Then, again, we know winter is coming, and we all feel determined, and rightly so, to enjoy the present beauty as much as possible. Surely, too, in regard to all pure pleasures (we must be quite satisfied on this point), the best thing is to enjoy them to the full, to throw the whole heart into them, and let our whole capacity for enjoyment be awakened and ready for gratification. Whatever we do we should do heartily and with all our might. It is wonderful to note the capability of enjoyment which we all possess, and people who seem only to permit themselves to be happy under protest surely or greatly.

Anxiously had I watched the weather as the 17th of October drew near; for on that day I had been kindly invited by Mr. Spencer, for many years head gardener at Bowood, and now steward to the present, as he has been to the late Lord Lansdowne, to spend a few hours with him; for though advanced to high office, Mr. Spencer yet lingers after his first love, and clings fondly to the pursuit in which he first won honour and fame. Still in the midst of his business he each week finds a leisure half hour in which to fondle the leaves of "our Journal."

On the morning of the 17th came heavy rain—a fierce down-pour, destined happily to clear the skies for the day, and leave the landscape sharp and bright to view. Now, you who wish to have a day's sight-seeing, one word to you—Never go alone. Cowper says even of solitude—

"You want a friend in your retreat
To whom to whisper—Solitude is sweet."

Much more do you want a friend on a day's excursion to whom to say, "Look at that tree, or that wood, or that prospect!" and when returning to touch his elbow, with the words, "Haven't we enjoyed ourselves?" Now, I had with me a friend of friends for such a day, a dear lover of horticulture, a great rosarian—I believe he would know one Rose from another even in the

dark; and as to fruit trees, I do not doubt he thinks an orchard-house the best kind of house in the world. I should not wonder if he took to living in one; and even if he did he would be quite safe, for though in a glass house he would not throw stones, he is far too kindly to do that.

In regard to Bowood, I have always felt, as a literature-loving man, that it not only bad, in common with most other noblemen's seats, nature treasures and art treasures, but, in addition, most interesting associations connected with it. The great statesman Lord Lansdowne, the good grey head which only a few years since we all in North Wilts knew so well, had during his long life delighted to draw around him poets, painters, singers, sculptors—in short, every one in any way eminent in art or literature. Bowles, the gentle and eccentric poet, was near Bowood, at Bremhill; Tommy Moore still nearer, at Sloper-ton; while Macaulay sat for the borough of Calne. Hence Bowood is not only indelibly connected with the great Lord Lansdowne, but also with those whom he delighted to gather near him or under his roof. Fox early foresaw the distinguished abilities of this nobleman; for in 1802, just after his (Fox's) return from Paris on his memorable visit to Buonaparte, then First Consul, he writes, "Never did I see a young man I liked half so much as Lord Henry Petty. Whatever disappointments his father may have had in public life, and in a still more sensible kind in his eldest son, he must be very unreasonable if he does not consider them all compensated in Lord Henry." This highly-spoken-of young man became the trusted friend of his Sovereign, and the father and guide of the House of Lords.

But while thinking of these things, and talking to my Rose and orchard-house-loving friend, a turn and a sharp pull bring us to Mr. Spencer's house. We are in good time, and so wander round the garden until our host and luncheon arrive. A pretty creeper-clad house it is, placed on a little knoll. The view from the garden is charming, as the country around is so diversified—little hill and little valley, then through openings other little hills and valleys, and through one opening is seen the square tower of Calne church. Soon comes our host with a warm welcoming English grasp of the hand. Luncheon dispatched, and many Bowood Muscets dispatched as well, the time for walking comes. First we look into Mr. Spencer's own pet house of Zonal Pelargoniums and admire many, while we wonder how the seedlings will turn out. Then on past Lady Lansdowne's school, where the children are in full joyous play, afternoon school having not yet begun. A little farther, and we come to a closed gate, to which the steward's key says, "Open, sesame." Straight forward through fine timber growing out of the smooth lawn, and by a turn to the right we come to the head of the lake, one of the finest features in Bowood Park. Standing near a Grecian summer-house I survey the scene. The lake in its length lies before us—not its full length, for at no point can that be seen, and it reminded me of one of the reaches of Ullswater. The water was lit up by the sunshine; the sunbeams striking it along the centre made a line of liquid silver. There I first entered into the meaning of Tennyson's words—

"The long light shakes across the lakes."

The breeze was fresh, so the groups of wild fowl were tossing like little navies. Truly the view before me was wonderfully beautiful. The lake is artificial, doubtless, but its art is so like nature that it seems artless. On the left edge of the water is a line of richly, and in some places heavily, wooded hills; one spur, dense and dark, comes down crag-like into the water, and almost cuts the lake in two. On the right edge of the water is the long lawn planted with choice trees of well-contrasting foliage; while far to the right on a gentle rise stands the house, which, seen at this point, looks imposing from its length. Think of this view, not only lit up by a bright sunshine, but this early in October, when

"Autumn's hand of fire has passed among the leaves."

But not yet can it be said that

"The rotting woodland drips, and the leaf is stamp'd in clay."

Oh, the glorious autumnal tints of the trees before me! The bright golden leaf of the Elm, the very life of an autumn scene; the russet of the Beech, and the rich brown of the Oak, and the yellow brown (another colour quite), of the Horse Chestnut! while amidst these deciduous trees were the dark green of the Cedars, and Pines of every shade of green, each beautiful, but more beautiful standing together. Well, I must leave this, for there is much to see.

Back again a little way, and we are directed to go down a dark

path by ourselves, and there wait awhile. The reason is soon clear, for at our feet is the bed of a brook nearly dry, while above, half hidden by foliage, is a waterfall minus the water. Some distance from the top of the hill we see broken rocks arranged to meet and divide the falling waters, the rocks covered with damp, dragging, sea-green-like weeds. Soon Mr. Spencer lets off the water from the lake. Down it comes, forcing its way through various subterranean passages, and tumbling headlong, broken, and broken again by the irregular masses of stone. I thought of Southey's line—

"How does the water come down at Lodere?"

This cascade, so well arranged, and having so great and deep a fall of water, has a very pleasing effect, and a useful purpose, as it carries off the surplus water of the lake into the Avon.

On we must go; so lingeringly we part company with the cascade and stroll on, turning every now and then to take another look, the last being a distant one through a vale of Cedars, and, seen through the dark branches, the falling water looked like a sheet of silver. Passing on up the lawn, with the lake to our left, we presently reach the house, stroll past the left wing, and stand on the steps of the grand entrance of the chief part of the building—that erected by Adams in the time of John, Earl Shelburne, grandfather of the Lord Lansdowne. Going on farther we reach what is most interesting in a horticultural light—namely, the left wing, for within the square formed by three sides of the building, the centre of the house being one side, is the Italian garden laid out some years since by Mr. Spencer. The contrast is very pleasing from an English park to, so it seems, the quiet, trim, but by no means tame beauty of a garden of some old Italian noble. I feel that I ought to have a copy of Dante in my hand, or a volume of the sonnets of Petrarch.

We ascend a terrace to reach the upper garden. There standing and turning round I notice two special beauties, and each arising from a simple cause. The wood on the further or hill side of the lake has been in different places cleared away, giving large patches of green turf, which relieve the eye and let in the distant downs. The other beauty is close to me. Up the high wall of the centre portion of the building is a Virginian Creeper growing mingled with Wistaria. The clear green leaf of the latter growing among the rich-coloured leaves of the former takes off their almost painful richness of hue.

Crossing the upper garden we enter the orangery, a place not often seen now-a-days, and which forms the whole back of the square, and taking a peep through the glass door at the chapel we enter the house, for by my good host's kindness I am to see the far-famed pictures.—WILTSHIRE RECTOR.

(To be continued.)

DEPTH OF PLANTING ROSES.

IN reference to Mr. Radclyffe's remarks on this subject at page 331, will you allow me to record a fact which tends to show that deep planting is not always fatal to the Rose on the Briar? About eight years ago a standard Rose (on the Briar), about 5 feet high, was planted in a garden in the usual way—namely, about 4 to 6 inches deep. It grew very little for several years—in fact, I thought at one time it would die outright.

About three years ago, however, I determined to make a raised bed on the spot where this Rose stood. That bed, about 3 feet high, the base being about 6 feet, and the top about 3 feet in diameter, was made, leaving this Rose in the centre. The first year after this was done, the Rose improved, the next it grew better still, and this, the third year, it has made some strong wood, and is evidently on the high road to become a very strong, robust plant. It is a Hybrid Perpetual, a very old variety, somewhat like Jules Margottin in shape, but not so bright in colour. How is this singular fact to be accounted for?—P.

[We should think that your soil is light, and that the great depth of it kept more moisture about the roots of the Rose. If the roots of the Rose had remained near the surface, and been well manured, mulched, and watered, the shrub would have flourished still better.]

LAROE PEAR.—I have this year gathered a perfect specimen of fruit from a pyramidal tree of *Maréchal de la Cour* grown in a pot in my orchard-house. It weighed 23 ozs. ! and was quite ripe, the flesh being very tender and melting, richly flavoured, and with a fine perfume. I have also had some fine fruit from Gansel's *Seckle*, a most delicious Pear, which is double

the size of the ordinary *Seckle*; the fruit obovate, the skin yellowish brown, smooth, and shining. It is handsome-looking, and delicate and perfect in flavour. No collection is complete without this excellent Pear.—WM. NEWTON, *Newark-on-Trent*.

RESULTS OF PLANTING POTATOES LATE.

I ENCLOSE an account of a simple experiment with two Potatoes. Being aware that much has been said and written about the early planting of Potatoes, I had often wondered whether the experiment had been tried as to how late Potatoes could be planted, and with what result. I can vouch for the correctness of the account of the experiment herewith sent, and I have been very cautious in observing from day to day whether any symptoms of disease were exhibited, but no such symptoms ever appeared.

It was almost an accident that caused me to plant the two shrivelled and apparently worthless tubers at all. Being in the habit of going to the soft-water tap frequently, I observed the two old Potatoes lying on a ledge near the lavatory. I wondered if they were put in straightway whether they would come to anything or make new tubers (or any at all), before the frosts came. I put them in the earth at once (July 24th), and if I am spared till another summer I shall certainly try a few rows of Potatoes planted late, say from June 19th to July 19th, not later, as the early frosts in October undoubtedly stopped the growth of the two I planted this season.

The question that occurs to me is, How was it that these two Potatoes, planted at such a late period of the season, escaped the disease when the complaints are almost universal as to the havoc which the disease was and is making?

I am quite inclined to think that the mysterious Potato blight appears at or very nearly at the same time every year; and I further believe, as a rule, the haulm of the Potato is not visibly affected until the tubers have attained a considerable size. Peculiar conditions of the atmosphere, we are told by the faculty, produce particular diseases in the human family; and supposing there is a peculiar condition of the atmosphere—something mysterious and entirely undetected—producing the Potato disease at a certain period every year, or as near as may be, the experiment I have recorded leads me to believe that if the plant is in an early and vigorous state of growth at the particular time of the year (August), when the disease usually appears, it may so happen that at this particular period of its growth it may not be so liable to be attacked by the disease as when more fully matured. I do not assert that this is so; but I think it would be well if experiments were made next season to try whether very late planting, as well as early planting, is effectual to resist the disease.—E. SHETHEARD, *Napton, Rugby*.

JULY 24th, 1867.—Planted in my garden, without manure, but in soil of medium richness, two Fluke Potatoes, one of ordinary size, the other a small weak "set." The plants grew rapidly, and were kept well earthed-up. October 30th they were dug up. From the larger set there were thirteen tubers. Eight of these would do very well for the table, ten would make good sets for planting, and three would be too small for use; weight, after cleaning, 1 lb. The small weak set produced five tubers. Three of these would make sets for planting, and two were too small for use; weight, quarter of a pound. All the tubers were free from disease, sound, and healthy. Seven weeks from the time of planting to the blossoming of the larger Fluke. The early frosts of October affected the haulm, but the weakest set much more than the strongest.—E. S.

PROLONGED HORTICULTURAL SHOWS.

JUST a few lines in reply to your correspondent, who seems to doubt the accuracy of my statement respecting the Royal Botanic and Horticultural Societies. I can only say that I should not have made the assertion if I had not been well acquainted with the affairs of both institutions.

"AN EXHIBITOR" asks me how I account for the satisfactory financial state of the York, Leeds, and Glasgow Societies? To which I reply, that there is no analogy between the Societies he names, and say the Royal Botanic, Horticultural, Manchester, Birmingham, and others that might be named, inasmuch as the former hold their shows in a field or room, and there is an end to the connection with horticulture; but the latter have gardens to keep up, and, of course, have to dis-

tribute a large sum of money for this purpose, consequently they cannot run the risk of losing money upon exhibitions unless these remain open long enough to pay expenses; therefore, as I said in my last communication, there are two sides to the question—a fact which I fear the majority of exhibitors almost ignore; and your correspondent may rely upon it that extra large shows will not be held unless exhibitors are willing to make some concessions. Further, I believe it will be to their interest to do so.—B. A.

ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 5TH.

FRUIT COMMITTEE.—G. F. Wilson, Esq., F.R.S., in the chair. There was at this meeting a large and interesting collection of Apples and Pears, which, as regards the size and appearance of the several varieties, was all that could be desired; but it was remarked that as a rule their full flavour had not been attained this year. For the best three dishes of dessert Apples Mr. Curd, gardener to M. G. Thoyts, Esq., Sulhamstead House, Reading, was first with large and fine examples of Ribston Pippin, Blenheim Pippin, remarkably fine, and Royal Pearmain. Mr. Whiting, The Deepdene, near Dorking, was second with beautiful examples of Adams's Pearmain, Ribston Pippin, and Cox's Orange Pippin. Among other varieties shown were Sam Young, Margil, Fearn's Pippin, Nonpareil, Rosemary Russet, and Autumn Pearmain.

Prizes were likewise offered for Monarch Pear, but were withheld, the best dish coming from the Society's garden at Chiswick, and the fruit from other exhibitors not being sufficiently ripe to merit an award. In the class for the best dish of Hayshe's Prince of Wales there was no exhibition; and in that for Hayshe's Victoria only a second prize was awarded, that being taken by Mr. Hughes, gardener to the Rev. George Kemp, Sevenoaks.

In the class for the best dish of any variety of Pear other than those already named, there were twenty-nine entries, and the competition was very severe. The first prize was awarded to Mr. Garland, gardener to Sir T. Dyke Acland, Bart., Killerton, for very fine examples of Doyené du Comice. Mr. Ruffett, gardener to Viscountess Palmerston, Brockett Hall, Herts, was second with Alexandre Lambert. From Mr. Turner, Slough; Mr. Beach, gardener to C. J. Herries, Esq.; Mr. Whiting, The Deepdene; Mr. Curd, Mr. Wilkie, Mr. Cox, Mr. Osman, Mr. Neale, Messrs. Ivery & Son, and others, came good examples of Beurré Bose, Van Mons Léon Leclerc, Seckle, Thompson's, Conseiller de la Cour, Napoleon, Châumontel, Duchesse d'Angoulême, Marie Louise, &c. Beurré Clairgeon from Mr. Cox, of Redleaf, was large and beautifully coloured. Beurré Diel was the variety most numerously shown, and several of the dishes of it contained large and handsome specimens.

From the Society's garden at Chiswick there was a basket of Pears, containing excellent specimens of Beurré Diel, Passe Colmar, Forelle, Winter Nelis, Broom Park, Glou Morgan, and other kinds; whilst Mr. Collins, gardener to Major R. Trevor Clarke, Welton Place, Daventry, sent two remarkably large specimens of Hacon's Incomparable Pear, which, with two fine examples of Hawthornden Apple, grown by Mr. Enticott, gardener to Lady Falford, Axminster, were produced after the Committee meeting was over. Mr. Hill, gardener to R. Sneyd, Esq., Keele Hall, sent Keele Hall Beurré Pear, but not in a satisfactory condition for judgment.

Three Queen Pine Apples, excellent both as regards size and ripeness, were shown by Mr. Perkins, gardener to C. Kyser, Esq., Stannmore; and from Mr. Drewett, gardener to Mrs. Cabitt, came Denbies Green-fleshed Melon, whilst Mr. Curd sent Couqueror of Europe and Golden Perfection. Mr. Curd also exhibited White Currants in good condition.

FLORAL COMMITTEE.—At this season of the year we cannot expect many flowers, and had it not been for the collection of plants from Messrs. Veitch, the exhibition at this meeting would have been very uninteresting. First-class certificates were awarded to Messrs. Veitch for *Aphelandra Rozellii*, a showy plant with bright orange-scarlet flowers; *Cattleya maxima*, an unusually good form; *Lælia prestans*, very beautiful, with deep rosy flowers; and *Dracæna Macleanii*, very distinct, with dark bronze foliage almost black. Among the collection *Dendrobium bigibblum* was much noticed, and was requested to be sent again; also, *Pandaunus graminens* (?) Some doubt was expressed as to the species. *Urecolina aurea* was sent in great perfection, also the beautiful *Cattleya exoniensis* with its distinct and splendid labellum. We also noticed a very good specimen of the beautiful *Vanda cærulea*, which, however, was shown with a larger spike by another exhibitor. A special certificate was awarded the collection.

Messrs. F. & A. Smith, Dulwich, exhibited a collection of their Tricolor Zonal Pelargoniums, to show their use for autumnal decoration, and to prove that the colour in the foliage is as bright now as in the summer months. Sultan, a golden-edged Tricolor, was very fine. Queen Victoria and Impératrice Eugénie, two silver-edged varieties with bright rosy zones, were very good; and Sybil, a Bronze Zonal, was a first-class variety. A first-class certificate was awarded the collection. A first-class certificate was also given for a very pretty *Tropæolum* sent by Messrs. Smith, and called Mrs. Treadwell. It is

a winter-flowering variety, with scarlet crimson circular flowers of good substance, and dark foliage, and is one of the best *Tropæolums* yet sent out. Messrs. Osborn, of Fulham, sent a fine plant of *Gentiana Fortani*, a tall-growing plant with large light blue flowers, which could not display their beauty from the cold atmosphere around them. A special certificate was awarded it. *Acanthus montanus*, with dark green foliage, armed with sharp thorns, and having pale lilac flowers, was also shown by Messrs. Osborn. Mr. Macintosh, Hammersmith, sent a seedling *Abutilon vexillarium*, an insignificant-flowering plant. Mr. Bort, gardener to H. B. Mildmay, Esq., Sevenoaks, exhibited a well-grown specimen of *Vanda carulea* with a tall pale spike. A special certificate was awarded him for its good cultivation. Mr. Curd, gardener to M. G. Thoyts, Esq., Reading, sent a variegated-leaved Russian Violet. There is another variegated Violet already in cultivation equal, if not superior, to the plant exhibited. After the Meeting a box containing two plants of double white and two double purple Brompton Stocks, arrived from Mr. D. Thomson, Archerfield Gardens, Drem, N.B. They were magnificent specimens, and quite extraordinary for the time of year. We can imagine how beautiful the best of them must look, and how valuable the plants must be producing such fine flowers at this time of the year. A fine plant of *Aralia Sieboldii*, in full flower, was sent from the Society's conservatory.

GENERAL MEETING.—Major R. Trevor Clarke in the chair. Five new Fellows having been elected, the Banbury Horticultural and Floral Society was admitted into union, after which, as usual, the Chairmen of the Floral and Fruit Committees announced the awards.

Major Clarke then directed attention to a Pelargonium, the result of a cross between one of the quercifolium section called White Unique, which was first brought into notice by Mr. Beaton, and Rollins's Unique, as showing how great an improvement may be effected even by a first cross. Major Clarke added, that he wished to bring the rough-leaved quercifolium varieties into notice, as they might be much improved. One of their good qualities was their great adaptability to the button-hole.

Mr. Murray called attention to a piece of a Lime tree which had been brought by Mr. Reeves, interesting from the marks which it exhibited, and with which the greater portion of the tree it was taken from was also covered. They appeared, however, to be merely the marks of a snail. Mr. Reeves having stated that two-thirds of the tree was in a similar condition, Major Clarke said he agreed with Mr. Murray that the cause was a snail, and urged members to bring to the Society's meetings anything that appeared to be abnormal, as such specimens frequently proved of much interest in a scientific point of view.

KEEPING ICE THROUGH THE SUMMER.

IF "A POOR COUNTRYMAN" dig a deep hole in his garden, and fill it with ice, I am afraid he will be sadly disappointed when he takes off the lid in the summer. If he has in his shrubbery a spot from which the sun is entirely excluded, and at the same time lying perfectly dry, I should recommend him there to deposit twenty cartloads of ice on a good bed of leaves. The ice should be well beaten together, and the heap made in a conical shape; it should then be thickly covered with leaves and straw, and thatched. Every time the straw is moved to take out ice, air is admitted and ice is wasted, I would, therefore, suggest a refrigerator, the cost of which would be trifling compared to that of a well, that the heap may not be disturbed too often.—F. M. K.

NEW ROSES.

I HAVE just read Mr. Kent's article. I am much of his opinion. I have Mr. C. Verdier's list, and I fixed on two, Prince Humbert and Merveille d'Anjou. We want these colours. I believe, of their year, these will be found to be good—Alfred Colomb, Charles Rouillard an excellent grower and having fine foliage, Camille Bernardin, and Exposition de Brie. Of the next rearing I like the look of Thorin and Horace Vernet. Miss Ingram will be the gem of the year. I had two blooms of it brought by "D." I unfolded them both to the innermost petal, and the folding was easy and perfect. It is a beautiful spheroidal Rose, thoroughly full to the centre.—W. F. RADCLIFFE.

PELARGONIUM LUNA.

My attention has just been directed by a neighbour, who has taken great interest in the Zonal Pelargoniums lately introduced, to an article in your Journal of October 10th by Mr. Wills on the bedding qualities of this now popular class, in which, after proclaiming himself the originator of the Bronze section and extolling his own seedlings, he has made a severe

attack upon the above-named variety, which, I need scarcely say, has now become a popular favourite.

Mr. Wills says, and I think most readers of the Journal who have grown this variety will say, most unjustly, that two or three hot days will mar its beauty, and make it useless as a bedding plant. How far such a condemnatory statement is true as regards its habit in this locality will be judged by my friend's disinterested remark to me—"That had Mr. Wills said that a few hot days considerably improve it, his statement would have been correct."

Luna has long since become public property, so that I have now no personal interest in proclaiming its merits beyond that of having introduced it to the public, but I feel bound in defence of the truth to contradict such a statement as that put forth by Mr. Wills.—T. J. SALTMARSH, *Moulsham Nurseries, Chelmsford.*

PROPAGATING MRS. POLLOCK PELARGONIUM.

NOTWITHSTANDING the unfavourable predictions of not a few, time has proved that Mrs. Pollock Pelargonium may now be fully depended on to do its part towards the embellishment of the flower garden. This being so, it is of some importance to know by what method of treatment it can be had in the greatest perfection. This appears the more necessary when we reflect that even yet some find they cannot have plants of it so good as they would like.

Mr. Luckhurst, in a late number of the Journal, recommended autumn propagation of this Pelargonium, while, as he states, in a contemporary it is advised to defer doing so till spring. Each way has its advantages; still, I must say I have found that the best results attend spring propagation.

In my experience cuttings in spring strike more freely and with more certainty than in autumn: when potted they grow more vigorously, and continue to do so after being planted out.

While advocating spring propagation, I am not to be considered as altogether despising or even much depreciating autumn propagation. Where a speedy increase of stock is the object, I believe it to be the best. Cuttings can be had from plants in the beds from June till October, and such will strike root with a tolerable degree of certainty; with me, however, the percentage of loss has always been greater in autumn than spring. Autumn propagation is effected at the expense of the old plants, for such become enfeebled by the amputating processes they have undergone, and present a pitiable appearance as compared with that which they would have exhibited had the knife been withheld. I would say, if autumn propagation be resorted to at all, let only such shoots be taken as have a tendency to crowd the whole; so doing rather adds to than detracts from the appearance of the bed. Such close cutting-in as Mr. Luckhurst practises would not be tolerated everywhere.

Another fault I have to autumn-struck cuttings of Mrs. Pollock is the tendency such have to become leggy and lose their under leaves. No doubt this can be remedied so far if the cuttings are struck early and have their points pinched out, so as to have side shoots established before winter. This, however, for reasons already given, is not always practicable. Such leggy plants on being planted out fail to resist the force of the wind half so well as "stocky" spring-struck plants. Mr. Luckhurst, however, surmounts this difficulty by taking off the tops of his autumn-struck plants, leaving these so many naked stumps. This he does when the roots have become active. Surely Mr. Luckhurst must either be indifferent to, or forgetful of, the reciprocity between roots and leaves, else he could never in this manner separate such connection. Leaves are essential for the proper elaboration of the sap: hence I never like to entirely denude the plants of their foliage, but allow a second shoot to push forth previous to separating the cuttings; thus, the check to the roots is reduced to the minimum. I have frequently seen plants decapitated in such a way as Mr. Luckhurst practises, but I have almost invariably found them become unhealthy and sometimes even succumb.

For wintering the plants lifted from the flower-beds I much prefer a position on a shelf near the glass in an intermediate house; but in the absence of such a house I would, without any hesitation or fear of injury, place them in a similar position in the stove or any other warm house. This may be contrary to what is recommended by so good an authority as Mr. Wills,

and, viewed theoretically, may be somewhat incorrect. Nevertheless, I have turned out plants of Mrs. Pollock and others of the same class from the stove and warm pits uninjured, or in any way constitutionally impaired.

At Yester, the seat of the Marquis of Tweeddale, some years ago, when most gardeners were eager to swell the number of their plants of Mrs. Pollock to a dozen, Mr. Shearer could count his by hundreds. I know much of his success was attributed to the high temperature in which he kept his plants. Cuttings taken from plants wintered in a growing temperature strike more freely than others taken from plants wintered in a cold house. I do not say that a continued exposure to a high temperature is otherwise than injurious to such plants; but they will submit to it for two or three months and be benefited thereby. The gradual transition in spring from a warm temperature to the flower garden enables them to withstand the change without any bad results.

When Mrs. Pollock is planted out in beds or borders, it is more upon the markings or brightness of the foliage than the flowers that we depend for effect: hence it is desirable to know in what situations and what soils the best results are to be obtained. I consider that only a moderately rich soil and an open situation, fully exposed to the sun's rays, are the essentials necessary for the production of bright well-defined markings in the foliage. I have found that very rich soil caused the colours to become dull and indistinct; while, on the other hand, very poor soil gave a stunted growth, and, although the leaves were well marked, such were small, and the plants had not a healthy appearance. Although differing somewhat from Mr. Luckhurst as to the management of Mrs. Pollock Pelargonium, still I must congratulate him on his success with it. Meantime, at the risk of being called by him a "retrogressionist," I must follow in the wake of that party. Further experience or advice may win me over to the other side. At present I partly adopt its principles; but, viewing the two systems in all their bearings, I unhesitatingly give the preference to spring propagation over that taking place in autumn. J. A., *Wallhouse Gardens.*

UNDER the above heading, page 275, Mr. Luckhurst makes some observations on the advice given in a contemporary, not to attempt the propagation of Mrs. Pollock in the autumn. Of course, he thinks such advice a step in the wrong direction. Not having seen the article in question, I am unable to form an opinion as to its merits or otherwise, but from the small portion he quotes, three very excellent reasons are advanced against autumn propagation, especially by those of your readers whose accommodation is limited. 1st, The plants are less likely to die if not propagated from in the autumn; 2nd, They would take up less room; and 3rd, They would be ornamental during the winter.

Without doubt the object of most persons is to increase their stock as quickly as possible. I quite agree with Mr. Luckhurst in this observation, but this laudable desire is one of the principal causes of failure.

Mr. Luckhurst says the cuttings are made as soon as the chief beauty of the garden is over. This expression is too vague and is calculated to mislead. I think it would have been more satisfactory had he given the dates when he took off his cuttings, and also when he potted his old plants, say for the present year. Does he consider the chief beauty of the garden over by the middle of August? or shall I say a month later? No, that could not be, for the chief beauty was not over then. Probably the first week in October was meant, which would coincide with what actually took place; the chief beauty was gone then.

If it is the middle of August Mr. Luckhurst means, I should not hesitate to say that there would be a fair chance of success with both cuttings and old plants if managed with ordinary care and attention; but if this is the date he means, I think it very probable that there would be some inquiry as to the sanity of any one stumping a bed or beds of Mrs. Pollock just about the time that the plants had arrived at their best; and it would require a man with a stronger resolution than mine, although not of the weakest, were I confident of the success of every cutting put in, to stump in the plants in a bed in the middle of September; but I should expect to lose from fifty to seventy-five per cent. under the best of management, both of the cuttings and old plants, in addition to losing a splendid display throughout the winter. I consider them as indispensable for in-door decoration in winter as they are for out-door decoration in summer. As for the third date mentioned—namely, October,

I shall be inclined to put it down *nil*, both for cuttings and old plants.

Mr. Luckhurst states that from one small plant in the autumn of 1863, he had four hundred plants in the autumn of 1867; but I confess I think his progress rather slow, for supposing no more than seven cuttings to be taken off each plant annually, then between 1863 and 1867 he ought to have obtained more than four thousand plants. This, I think, will be considered a very low figure, when I state that I have taken up and potted since the 27th of September, upwards of two hundred plants of Mrs. Pollock, which would each furnish at the present time from twelve to sixteen good cuttings, and in hands that wanted to make the most of them, double that number.—J. COUPLAND.

VINES AND VINE BORDERS—NATURAL TEMPERATURES.

WHAT does Mr. Thomson mean by saying that my persistent attacks on his little work are worthy of a better cause, and that I deserve the fate of all who have recourse to false colours? If Mr. Thomson had not endeavoured to answer a question addressed to Mr. Wills, it is very likely I should not have written about his treatise in the way I have, and yet I have said nothing more than I had a right to do. I am an amateur, the proprietor of a villa residence, and unable to "afford the luxury of a scientific gardener." I am, therefore, in all truth one of the very numerous class whom Mr. Thomson professes to advise. Several years of personal observation have made me familiar with many countries and half the climates of the world. I have verified by careful investigation and experiment, much of what has been written by Lindley, Endlicher, and De Candolle, and because of the knowledge so obtained, and standing on a vantage ground not shared by many of my brother amateurs and "proprietors," I, one of the advised, ask the adviser to give proof of his wisdom. Had Mr. Thomson accepted my offer to discuss his treatise in a fair and proper spirit, and with an earnest desire to prove clearly what is necessary for an amateur to do to enjoy a bunch of Grapes of his own growing, and had he asked me for my name, I would willingly have given it, and am still ready to do so.

It may be that my reply to Mr. Thomson's letter of the 21st of March, was not worthy to be so called, but Mr. Thomson would do well to explain how he makes an English viney with a minimum temperature of 70°, to be cooler than the Rhine vineyards with a mean summer temperature of 65°. I have been very careful to give the mean temperatures of the seasons, and to avoid all mention of exceptional temperatures, because these are of little or no value. In the month of May I buried a thermometer 1 foot beneath the surface of the ground, at 1 p.m. it stood at 60°; another at 6 inches in depth marked 64°; a third at 1½ inches under the surface registered 101°; and a fourth, suspended 6 inches above the ground, and fully exposed to the sun, stood at 100°; while a fifth, facing the north, in the shade of a wall, barely reached 75°. Buckingham says he found the temperature of the air near Nazareth, 92° in the shade in the month of February. Dr. Clarke found the temperature of the air at Cana in Galilee, to be from 100° to 102½° in the shade. On the other hand, a temperature of 66° is nothing unusual, even under the equator. Such temperatures as these are not to be taken as proper for the plants where they are found; on the contrary, extremes of heat and cold are always injurious to both animal and vegetable life. In the almost perpetual summer of the Brazilian forests, the thermometer will often not vary 5° in a month, and the mean temperature of the air is but little in excess of that of southern Italy. Extremes of temperature are not unusual upon open and unsheltered plains, and, as a consequence, cultivation becomes all but impossible. It should also be remembered that a tree or shrub exposed for a short time to an excessive solar heat sustains but little injury, because the leaves and fruit receiving the full blaze of the sun are often less than ten per cent. of the whole number on the tree. Add to this the continual motion of leaves and branches in the open air, and we have something very different from the state of things in a viney.

I have more than once admitted that Mr. Thomson has grown fine Grapes, but that has little to do with his advice to amateurs, who, perhaps, care to figure at a show as little as myself. It is, however, quite possible that my Grapes may yet appear in competition with Mr. Thomson's. At present I confine myself to Grape growing as a source of profit, and here, I think,

Mr. Thomson must be content to take second place. I began to send my Grapes to market on the 22nd of May, the wholesale price being 4s. per lb., falling to 3s. on the 10th of July, for first, and 2s. for second quality. The 1866 bunches averaged 11 oza. each, and adding last year's autumn crop, my weakest Vines bore fourteen, and my strongest thirty-three bunches each, within thirteen months from the day of planting. I hope the Editors will make some use of the photograph, but should they be unable to do so, I shall be glad to place a copy in the hands of a photographer, that the readers of the Journal may procure copies if they wish to do so.

As Mr. Thomson recommends a minimum night temperature of 70°, a rise of 10° by fire heat in the day, and a further rise of 10° by sun heat when he closes his house, will he explain how his maximum of 90° lasts for one hour, and his minimum of 70° for twenty-three hours? Surely it is not because I am "willingly blind," that I cannot "see at a glance" how this is done.

In my last letter, I said that "in a proper temperature the leaves while still green becoming partially detached from the shoot, is an unerring sign of a perfect maturity of the wood, which then becomes merely a means of communication between the root and the bud." Now, I thought this was a fact known to others as well as to myself, because a leaf falling prematurely—say at seven months, leaves behind it a green shield firmly adhering to the shoot; but leaves remaining healthy nearly to the tenth month, show when thrown off a brown surface, having from three to six green spots. The shoot if cut through will be found full of sap, showing plainly enough that it is not arrested, but diverted to the bud, which will remain at rest only till a suitable temperature encourages its development. I am indebted to the late Dr. Lindley for many hours of quiet enjoyment, and I agree with him, that roots are never perfectly at rest, and that their active condition fills the sap vessels, and distends the whole tissue of the plant. All this corroborates what I have written above, and condemns the statement of Mr. Thomson, that a Vine whose roots have been "killed by the winter's rains," is still in a condition to support a vigorous growth till the second swelling of the berries.

I believe my letters have not been unacceptable to those who take an interest in Grape-growing. I have confined myself to facts, and I am certainly not guilty of "persistently misrepresenting" Mr. Thomson's teaching. He must not think his letter, needing as much explanation as his treatise, will be accepted as a satisfactory closing of our controversy. Nothing that I have written, and I hope nothing I may write, will ever mislead a reader of his book. Will Mr. Thomson accept the friendly hand I now extend to him, and lend me his strength to throw down the strong fence of humbug surrounding the simple question of Grape-growing, and accepting my invitation to discuss the matter contained in his treatise, still allow me to retain my initials of—H. S.?

IN answer to a letter from "H. S." criticising Mr. Thomson's able and standard work on the Vine, I should like to bear testimony to the exact truth of what Mr. Thomson says at page 48, as "H. S." not only denies its correctness, but goes on to say it is an "impossibility." Mr. Thomson, speaking of the diseases to which Vines are subject, mentions as one of the most frequent causes of shanking the cold and wet of an outside border; and he states that even where the roots have not penetrated into a bad subsoil, and the foliage of the preceding year has been fine and the wood strong, this disease will sometimes make its appearance, because the strong young roots, which he aptly compares to the points of a goose's quill, and which are the main source of the luxuriant foliage and wood of the preceding autumn, are destroyed by the winter rains; and though (this is the passage objected to by "H. S.") "the Vines have a given amount of stored-up sap in them, which while it lasts enables them to grow vigorously . . . a period arrives when it is exhausted."

Now, though I am only an amateur, I have given my closest attention to Vine culture; and if my powers of observation are worth anything, I must say that this passage in Mr. Thomson's treatise exactly describes the condition of one of my vineyries during the spring of this year.

Two years ago, when I began Vine-growing in this place (the soil is a rich loam on a marly clay), I found in the old garden the remains of what had been a good viney; but as all the glass had been removed some years ago, the foundations of the walls were all that remained of the former viney. The old

Vines, however, were still growing in the border where they had been planted upwards of twenty years; but Nettles and all manner of rampant weeds had effectually choked them up, so that their growth had dwindled down to poor little shoots that never ripened and, of course, bore no fruit. I began by cutting off every particle of wood down to the ground, several of the stems sawn off being 4 inches in diameter. I then cleared the border of weeds, and gave it a good dressing of dung, lime rubbish, and sewage. In the following summer I trained one or two young rods from the old roots up to stakes and wires, and when autumn came a span-roofed house 45 feet by 19 was erected over them. The shoots were then cut back to 3 or 4 feet, and in the following year, when the dressing began to tell, very vigorous wood was made, but those strong goosequill roots of which Mr. Thomson speaks were destroyed by the winter, and when I commenced forcing on March 1st, though the great plump eyes began to push out, and I expected soon to see the bunches show, a terrible pause ensued, and week after week passed in April without any progress being made. I wondered why such great buds should produce such puny little shoots, and till I read Mr. Thomson's book I did not fully comprehend it; but as it was evident that the roots would not back the buds up and enable them to progress, I saw the only hope of a crop was to diminish the heat and wait till the cold outside border became warmer and the fibrous roots could come into play. For quite six weeks I saw but little change, but when May came my hopes revived. The stored-up sap contained in these plump buds and strong gross canes was sufficient to make this beginning, but that was all. When the sun came to the rescue at last and warmed the border, fresh roots were formed; and though most of the early growths came to nothing, fresh eyes shot forth luxuriant foliage, which went on, and plenty of bunches at last rewarded my patience. These Grapes have now coloured and ripened well 164 bunches, some over 2 lbs. in weight, but there is a tendency to shanking about several of the Vines (ten in number), which, considering the state of the border for so long, is not to be wondered at.

Now, is not this a case of stored-up sap? "H. S." says that if there be any stored-up sap, a Vine carefully taken from the ground and suspended in a proper temperature ought to grow till its stores of sap are exhausted. So I believe it would if the roots were wrapped in wet moss. If the roots are not in the ground or in a moist state, of course the stored-up sap would quickly dry up; but if they are in the wet cold ground, though not in a state to draw nourishment from it, the stored-up sap is kept from diminishing, and will, as in the case of my Vines, go as far as it can. This is, I believe, Mr. Thomson's meaning, but I leave him to answer this and the rest of what "H. S." has to say. All that we want to arrive at is truth, and the only way likely to lead to this is by carefully noting facts.

As for the prophetic Vines of Judah or the temperature of Western Africa I care not, nor for any *a priori* assumptions of how the Vine ought to grow. "In the close damp atmosphere of 100°, charged with pestilent vapours from sulphur-bedaubed hot-water pipes," the finest Grapes which the world now produces are, as far as I know, grown. No doubt the transparent air of Samaria sounds very nice, and is far better suited for the health and growth of animal life than the humid air of the tropics; but the most glorious vegetable productions thrive generally best under those conditions which are either fatal or injurious to animal existence: therefore this kind of argument is worthless. The only way of testing the truth of Mr. Thomson's or any other treatise on Vine-growing is by results. Who can produce the best Grapes?—H. NICHOLLS, *Hawkhurst Lodge, Horsham.*

"H. S." has brought so much vague theory to bear on this subject, with a view to condemn the teachings of my treatise on the Vine, that it must be a relief to the readers of THE JOURNAL OF HORTICULTURE, and probably to himself, to pass from the region of theory to that of facts: therefore I send along with this four berries of Muscat Grapes, the collective weight of which is over 2½ ozs.; they are picked from a large house of Muscats, the temperature and general treatment of which have been exactly such as I recommend in my work on the Vine. And allow me to submit to "H. S." that if he is anxious to arrive at truth in this matter, he cannot do better than send a few berries of the same Grape grown on his system to the Editors of THE JOURNAL OF HORTICULTURE, who will judge of our different systems by their results, and if his are

the more satisfactory I shall become his pupil, but if the reverse, I shall hope to receive him as mine.—WM. THOMSON.

[The berries were of uniform size, and perfect in colour, ripeness, and lusciousness. We never met with finer specimens.—EDS.]

PROLIFEROUS FERNS.

I AM inclined to agree with "W. O.B.'s" remarks with regard to the cause of Ferns becoming proliferous when treated in the way he describes; still there are many varieties of *Polystichums* and a few *Scelopendriums* which have proved themselves constant with regard to their proliferous nature.

From a large plant of *Polystichum aculeatum cristatum*, I have taken no less than ten bulbs, and all are growing well. In the autumn of last year it showed signs of throwing up very large fronds, but confined damp atmosphere caused the fronds to come up in the spring, stunted, and with abrupt apices; nearly every frond produced one or more bulbs. I do not expect it to be proliferous another year, unless treated in the same manner; and even then it is more than probable it would not be so. I have had the plant for five years, and it was never proliferous before. One *Polystichum angulare grandidens*, purchased this year, has been earthed up, but another has not; both have produced a few bulbs, but not on all the fronds. I think a test of at least two or three years must be allowed before this can strictly be called *Polystichum angulare grandidens proliferum*. On my fernery in the open air *Polystichum biseratum* occasionally becomes proliferous. With me, *Scelopendrium Wardii* and *Asplenium refractum* have always proved proliferous. I have a plant of *Osmunda regalis*, var. *cristata bulbifera*, which is bulbiferous, the same as that described by Mr. Lowe, in "New and Rare Ferns," vol. ii. page 461.

If it be possible to obtain it, a correct list of proliferous Ferns which have stood a test of four or five years' growth, would be exceedingly valuable to all those interested in British Ferns.—J. E. M.

HOW TO HANG AN AXE.

STEPHEN WASHBURN sends the following: "Having seen an article on chopping and the way an axe should be hung, (See JOURNAL OF HORTICULTURE vol. viii. page 252), and having adopted in my own practice a plan somewhat different from the method there recommended, I would like to give my own views on the subject. In the first place, the crook at the hand-hold should be no longer than the width of the man's hand who



uses the axe; all the rest of the curve should be the other way, and just enough to make the edge of the axe naturally incline forwards; and the two corners of the axe should be exactly on a line with the middle of the hand-hold, as shown in the accompanying cut. This will always bring the bit of the axe square upon the stick you are chopping. This is the correct principle, and will be admitted by every one who has ever done much chopping.—(Canada Farmer.)

HEATING BY A STOVE.

I HAVE a small greenhouse, heated, for economy's sake, by an old Gill stove in a shed on the other side of the back wall. Fancying that much heat is lost, I thought of placing a case, formed of sheet iron, over the stove, so as to confine the heat, and having an aperture made through the wall from the space so enclosed and above the top of the stove, so as to allow the heat to pass into the greenhouse. I am, however, at present deterred by the fear that the heated air from the surfaces of the stove would be injurious to the plants. Will you say if such a proceeding would be accompanied by any danger?—W. B. R.

[We have advised another correspondent to do exactly as you propose doing with your stove—leaving an opening round it, and allowing the heat to go from that opening into your

greenhouse. We have omitted to say to him what we now say to you, that if the opening next the house is divided by a wide board, or a piece of sheet iron, placed in the middle, so as to allow an opening of 6 inches at the top and 4 inches at the bottom, the heated air will go out at the top, and the colder air of the house will be drawn in at the bottom. If you have no tender plant directly in front of the opening, the heated air from the stove will do no harm; but if you found it to be too dry you might suspend a thin woollen cloth over the opening, and keep it moist with the droppings from a piece of list, with its other end in water, acting as a syphon.]

SCALE PREVENTION.

As scale is one of the great evils that attend the steps of the forcing gardener, no stone should be left unturned; in other words, no information should be withheld as to how to kill or prevent it, bearing in mind the old adage that "prevention is better than cure." Still, there is no doubt but that the scale is a fine corrector of idle habits, for if a gardener is inert scale will be active and persevering, and soon show his employer what manner of man he is.

I have been led to notice scale prevention, so successful here, as is scale killing, from reading the failure of methylated spirits in killing scale with Mr. Pearson. The mode of scale prevention practised here by Mr. Perry, our Orange-tree manager, is to syringe the trees once a-week from the middle of April till the beginning of October with pure quassia water, a decoction of 4 ozs. of quassia chips boiled ten minutes in a gallon of water, and suffered to settle and become as clear as pure water. Now, as I take it, this bitter dose spoils the flavour of the pasturage, consequently the flocks of scale become weakened in constitution, and thus fall easy victims to methylated spirit. In the case reported in your last number, page 331, it seems to me that the scale insects had fattened under the care, or want of care, of the Orange-tree keepers, and had become strong and muscular. The conclusion to be arrived at is, that my very old friends Barron and Pearson, found the flesh strong and the spirit weak; they must in future act on the converse of this, and make scale insects weak by prevention. I may add, that our Orange trees are looked over, without moving them, about once a-week; or, if here and there a straggling scale is seen, a small painter's brush is dipped in methylated spirit and applied; it never fails to kill.

As to scale and aphid nostrums from inventors, I have had them without end, even that so childishly named "Insecticide." Why not John Smith's Insect Killer? It would have had some meaning. We ought soon to have from some chemist a mixture called the Norfolk-Howardicide instead of bug-killer.

The great advantage of the prevention system in Orange culture is that there is no occasion to remove the trees or to dip them. Mr. Pearson could not have thought of the difficulties of dipping some seven or eight thousand Orange trees, as would be required here, or the utter impossibility of dipping large trees growing in tubs.

I have for some years past left off using the different nostrums advertised for insect killing. Some of them are very offensive, even dangerous, and I firmly believe the end of all such applications may be gained by mere simple means. I, therefore, do not hesitate to give my short list of things that kill or prevent the attacks of insects.

1.—For aphides of all kinds, in-doors or out, winter or summer, 4 ozs. of quassia chips boiled ten minutes in a gallon of soft water, and while cooling 4 ozs. of soft soap dissolved in it. Many hogsheds of this decoction are used here in summer, and always with effect. Sometimes two dippings of the shoots or brushings of the under surface of the leaves are required. This innocuous mixture has superseded filthy tobacco juice and many disagreeable compounds.

2.—Lime and soot, made into a paint with water, so as to be of a dark lead colour, is the most simple and most efficacious of all tree-paint mixtures. It should be used liberally in November with a large painter's brush. Every shoot and bud may be covered with it, and in about a fortnight, if heavy rains come on, it will be washed off and leave every bud and shoot glistening with health. This simple and cheap mixture ought to displace those horrible and disagreeable paints of clay, sulphur, and manure, and other ingredients, very ugly and offensive.

3.—For *Aphis lanigera* on Apple trees no remedy is equal to Gisburst Compound; a strong infusion, 1 lb. dissolved in a gallon of water.

4.—Methylated spirit for the destruction of scale.

5.—Pure quassia water, prepared by boiling 4 ozs. of chips for ten minutes in a gallon of water. This should be used as a preventive by syringing plants or trees with it once a-week, or more frequently if the aphid tribe is particularly active.

These simple preparations give but little trouble, and are as efficacious, or more so, than the numerous "washes" and other elaborate preparations so often recommended.—T. R.

PELARGONIUM MISS WATSON.

I do not think it necessary to occupy your valuable space to the exclusion of other matters of more interest and benefit to your readers, by any lengthy reply to Mr. Watson's letter, which appeared in page 331 of last week's Journal. I shall merely deny that I have, as Mr. Watson puts it, made a butt of "Miss Watson."

I stated at page 270, what my opinion was respecting the merits, for bedding purposes, of some of the Variegated Pelargoniums shown at the late exhibition, and those convictions were conceived and expressed without any feeling beyond the bounds of fair and legitimate criticism. Mr. Watson considers that every person is doing him an injury who does not happen to entertain the same opinion of Miss Watson's good qualities as himself.

Most of the readers of THE JOURNAL OF HORTICULTURE who have had frequent opportunities of hearing Mr. Watson deliver his desultory disquisition, both at the metropolitan and provincial exhibitions during the past summer, will at once see that his letter, which the Editors published at page 331, is a repetition of it, and they will know for what purpose he has sent it.

I think Mr. Watson has no authority for making use of the names of several gentlemen in the way he has done, and that they would be very shy in undertaking such a thankless office as that of even giving an opinion on the merits or demerits of the Pelargonium Miss Watson; also that he has rather overstrained the point, when he tells us that the plants he exhibited on the 15th of October, at South Kensington, had only been taken from the parent plant ten weeks, and that they (I suppose he means the foliage of the plants) were well over the sides of the pots. I will, however, thank Mr. Watson to send me a good strong plant of Miss Watson, for which a post-office order shall be forwarded him to the amount of its value. I will give it a fair trial, both in the open air and under glass, and if it sustain Mr. Watson's statement, I will most willingly withdraw the opinion I have formed of it, and substitute one more in accordance with Mr. Watson's wishes.—J. WILLS.

[We must decline any further communications on this subject.—EDS.]

NUNCHAM PARK.

(Continued from page 315.)

PASSING into the third division of the garden, I found there White and Red Antwerp Raspberries in full autumn bearing, in rows across the main quarter, and next to them a large piece of the Fastolf, maturing fine canes for next year. And now are those Spanish Onions? No, they are the Nuneham Park Onion, and distinct from other varieties, and I never saw such a splendid crop in my life. A hollowness about the base pertains to, perhaps, too many of them for perfect symmetry, but Mr. Stewart will soon improve this exceptionable feature away. It is, moreover, an excellent sort for keeping, and hardy for winter, as has been proved, and is being proved by a bed on the south border sown partly with it and the Reading Onion, side by side. According to my request, Mr. Stewart has sent me a measurement and weight which will, doubtlessly, surprise a few. "Ground, 18 yards long by 13 yards wide. Weight of Onions, 19 cwt. 5 stones 2 lbs.;" and he writes, "I think this is the heaviest crop that I ever had, although I have grown some individual specimens larger." Some which I have seen were larger, though not of so good a form as a sample I could have singled out from this year's crop. I think they were grown by Mr. Stewart, and exhibited at South Kensington, at the International Fruit and Vegetable Show in December, 1865. Now, in the event of some people still retaining their doubts about this Onion being the White Spanish, there was a proof to the contrary—namely, a challenge of Onions growing upon the spot. The sorts were Brown Globe, a good sample of the sort; Danvers Yellow, ditto;

White Globe, ditto; New Venetian Giant Tripoli, coarse, thick-necked, and many doubles; Trebon, very good, but coarse; and White Spanish, also coarse. None of these, even with most careful cultivation, could compare with the Nuneham variety for weight, symmetry, or fine quality for the kitchen.

Next to the Onions was a quarter of old Gooseberry and Currant bushes, soon to be done away with. A rather large piece of ground was also devoted to New Zealand Spinach, as a difficulty is experienced here in growing the common kinds, which it is difficult to understand; for one would suppose, from the nature of the soil—a rich, brown, sound, sandy loam, nearly 6 feet deep, that it would grow anything, and more particularly Spinach. A parting glimpse at the south border next to the young Onions revealed, what at a distance I concluded to be another bed of young Carrots. I suppose I was thinking aloud as about to note it so, when Mr. Stewart, in a voice of interrogation said, "Carrots?" Parsley! "Why, what do you want with so much Parsley?" "Oh!" he answered, "I once had the misfortune to be caught napping in the matter of Parsley, and the wiggings I had from the cook in consequence made me vow and declare I would never more remain minus that indispensable herb for a single hour." Not this winter I can answer for, and it is an excellent sort besides. To all young men who are living in hopes of some day conducting a garden, let me say, Take a note of this conversation, for should they ever be caught short of Parsley, and the cook come to know it, they will certainly find it no laughing matter.

Further down this border there was a large bed of fine Carrots, too large. They would go to the lodge-keepers and others in the park, whom Mr. Stewart has to supply with vegetables from the gardens. On the lower half of this central piece, new plantations of Gooseberries and Currants, partly trained upon trellises, now mark the path of progress. Then varieties of Runner Beans, one of them a seedling of Mr. Stewart's, I think; but I saw on the Caseknife Runner pods hanging by bushels, though on the old Scarlet Runner there were but few remaining, a fact which showed plainly which the men were ordered to gather, and was by no means commendatory of the Caseknife. There was also an extensive bed of the Custard Marrow, and the old white and yellow Vegetable Marrows, some of them Daniel Lamberts, and others comparatively small. This south or Apricot wall is chiefly occupied with many old trees of that fruit already doomed; but there is a supply of young vigorous trees in perfection. The north wall is also covered with old Cherries, and every foot of the border is occupied by spring bedding flowers.

Having thus taken my farewell note within the walls of one of the finest of kitchen gardens for site, soil, and judicious management that I remember, I stepped out at a north corner door into the orchard, or what may be properly called a broad eastern slip. Here choice late Pears—viz., Beurré Duhaume, Prince Albert, Vicar of Winkfield, L'Inconnue, Joséphine de Malines, Easter Bergamot, Monarch, Crasanne, and Ne Plus Mouris, are trained against the east wall, and at the farther end of the slip is the pumping machinery, likewise the compost-yard. Fresh turves were also being stacked for potting purposes, &c. They were of a sandy loam, 3 inches thick, well matted with fibre, and they are made to pass through the fire just before they are used as compost. This yard also contains a large Mushroom-shed, in which I observed stowed away numerous lengths of wall-coping-boards for protection from spring frosts. Plantations of Filberts and rows of healthy young Apple trees were bearing a good sprinkling of fruit, being well sheltered here, and there were besides Turnips of various ages, large plots of Artichokes, both Globe and Jerusalem, and many other productions.

Returning to the south slip, which is, indeed, a repertory of vegetable produce, I singled out Nuneham Brown Cos Lettuce and Mr. Stewart's Beetroot, as being excellent of their kinds. I also noticed large plots of Sea-kale and Parsnips. Halfway up this slip, by turning through a wicket and a model Holly-hedge, protected outside by close palings, access is gained to an extra outward slip—a nursery for Conifers, forest trees, Quickset, &c., very interesting, and requiring a Robson for specification. Re-entering, then, by the wicket, the broad walk which strikes across the divisions of the garden is seen in perspective, through large, skeleton, iron-work gates, arched over by the outward wall, with corresponding arches in line through the opposing parallel walls of the divisions. To the right of this iron gate, as I then stood, against the south wall of the slip were Apricots, to the left "Grosse Mignonne Tardive" Peaches, ripe and of fair size, with a colour of dark

blush; and Brunswick and Brown Turkey Figs, of excellent flavour, in quantities. The trees are also very fine. Mr. Stewart thoroughly soaks the roots frequently with soapuds, which they relish amazingly, and of this desirable liquid, for Peach and Fig trees especially, he is furnished always with a bountiful supply from a large underground-tank at the end of the laundry close by. He told me he was once an advocate for stopping the summer shoots of Figs, but he has become convinced that the practice is wrong. He now sedulously preserves the young shoots in their entirety, nails them in at full length at pruning-time, and then cuts away as much of the old wood as possible to make room for the young wood. I shall become a convert to his practice, for the very look of his trees indicated superior management; nevertheless, I am now gathering excellent Brown Turkey Figs from a tree that I have treated from its youth upwards on the stopping-plan.

I now proceeded once more to the back of the garden-house whence I first started, noting as I went a difference in the appearance of the gravel at one part of the walk. Some Navigation Commissioners, having fifty loads of clean-washed gravel, gladly presented Mr. Stewart with it for the sake of getting it hauled out of their way. It will do admirably to surface-mix with the rather stiff, clayey, adhesive gravel here.—UPWARDS AND ONWARDS.

(To be continued.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

TRENCH and manure ground where any is vacant. Collect leaves for covering purposes. *Artichokes* (Globe), should now have some of the superfluous leaves cut away, and be soiled 6 or 8 inches high up the stem. The general practice is to surround the plant with leaves recently fallen, and to soil over these in a sort of mound, then to force a wisp of hay in the centre of the crown. *Cabbages*, remove all decayed leaves. *Cauliflowers* in head should be taken up and beeled close together, covering them with long litter in severe weather. *Sea-kale*, collect leaves for covering.

FRUIT GARDEN.

It is now a good time to take up and root-prune such trees as are growing too luxuriantly to wood without producing fruit. The tree should first be properly taken up, and this is neither well nor easily accomplished by commencing to dig out a trench at too short a distance from the stem. Let a wide and deep trench be opened, so that a man can work with freedom standing on a level with the lower roots, he will then find less difficulty in undermining the tree. As the small branches and fibres of the root are cleared, they should be tied in bundles to the larger, to prevent their being bruised, and to be out of the way of the workmen. When the tree is turned up, large perpendicular roots should be first cut off, then some of the others, cutting in a slanting direction on the under side, and finally all bruised portions should be cut clean. Replant as soon as possible in well-trenched ground. Trees that are not thriving may be similarly taken up, but all sound roots should be preserved, except such as have penetrated into a bad soil, and in replanting better soil should be introduced.

FLOWER GARDEN.

Let the planting of autumn bulbs be completed as soon as possible. The growth of bulbs is a winter and spring study, and a most beautiful style of gardening has been enjoyed and disappeared before the beds can admit the tender exotics which are to adorn them in summer and autumn. If you can afford to do so, buy Crocuses by thousands, and Tulips and Hyacinths by hundreds. Remember they are all very ready of increase, and with care your outlay will come back with interest. In some beds a few early Tulips and Hyacinths may be mixed with the Crocuses, so that when the latter are off, the beds may still be attractive; but probably the borders will generally be preferred to separate beds, and then the following plan will be found advantageous. Let the outer row be composed of Crocuses, the next of Hyacinths, and the third or inner row of Tulips; you need not be afraid of planting too thickly, but let there be an interval of 2 or 3 inches between each kind of bulb. The Crocuses will have ceased blooming by the time the Hyacinths are in their prime, and the long and graceful foliage of the former will make a pretty fringed border for the latter. Take up all the Dahlias when the tops are frosted. Do not clean too much soil from them, it will prove a protection if dried on them. Strong roots should be placed in a warm and airy place, in order to have them thoroughly dry; weak roots must

be potted or covered with dry sand. Neapolitan Violets should be thoroughly cleaned from weeds, runners, and dead leaves, and have a considerable quantity of dry sand atrowed amongst them. This will prevent the ravages of the slugs; if out of doors, the protection of hoops and mats must be afforded. Plant out Hollyhocks and other biennials.

GREENHOUSE AND CONSERVATORY.

The importance of light is universally admitted, and at this time of the year it is of the utmost moment so to arrange the stock in houses as to secure a due proportion to each of the tribes, remembering especially those from brighter climes. All retarded autumn flowers should have as light a situation as possible near the glass, and not far from gentle ventilation. Such plants as the following well deserve much attention at this period—*Euphorbia jaequiniaeflora*, *Eranthemum pulchellum*, *Geissomeria longidora*, the *Heliotrope*, *Apelandra cristata*, *Gesnera zebрина* and *bulbosa*, *Scarlet Pelargoniums*, *Centradenia rosea*, *Linum trigynnum*, *Mignonette*, *Salvias*, *Calceolarias*, *Cyclamens*, *Cinerarias*, *Verbenas*, &c. These, if attended to as previously directed, will be gay for weeks, and with *Chrysanthemums*, *Roses*, and *Camellias*, will prevent any deficiency of flowers occurring between the autumn flowering plants and those of the spring forcing. Above all let every glass sash be thoroughly washed immediately, both those of the houses and those of the frames or pits. A well-managed conservatory should now look gay. The dark and glossy leaves of healthy *Camellias*, and their lively-coloured flowers, will offer a charming contrast; and these, with delightfully perfumed and gaily-tinted *Bourbon*, *Hybrid China*, and *Perpetual Roses*, will, in addition to Chinese *Chrysanthemums*, produce a most gorgeous effect. Maintain a mild and genial atmosphere, with a temperature of from 50° to 60° by day, sinking to 45° at night. Let the floors or some portions of the house receive a sprinkling in the afternoon, provided a little back air can be given to prevent drip. Look regularly over the plants, remove all decayed and decaying leaves, and keep everything sweet and clean. Watering must be performed with care, particularly in the case of large specimens; they should have no more moisture from the watering-pot than is sufficient to keep them from flagging. No artificial heat need be applied until danger from frost is actually apprehended, but take care that the heating apparatus is in such order that it can be instantly used, as the necessity for it may be nightly expected.

STOVE.

In order that this department may look as little like winter as possible, some previous attention to that class of plants which blooms naturally at this season, will have been necessary. *Gesnera zebрина*, *Achimenes picta*, and the numerous *Begonias*, constitute a portion of these. Before we introduce plants forced out of their natural season, we should avail ourselves of those which bloom in the regular course of nature, without artificial inducement or stimulus. Let such of the *Orchids* as have completed a good summer's growth, and which are somewhat inclined to be deciduous, sink gradually into repose. Those evergreen kinds, such as some of the *Dendrobiums*, the *Aërides*, *Saccolabiums*, and *Vaudas*, on blocks, or in baskets, should be lowered a little from the roof, if too near, in order to escape the vicissitudes of temperature to which that situation would expose them in winter.

FORCING-PIT.

Keep up the supply of all kinds of bulbs, and the usual shrubs and other plants required for winter decoration.

PITS AND FRAMES.

Let all stock here be plunged in fresh sawdust or coal ashes, and be kept near the glass. Cover up with mats at night anything tender, and with this covering a little air may be left at a light or two to harden the stock, by allowing the vapour to pass away. Let all *Strawberry* plants in pots for forcing have proper protection immediately. Many of the failures occur through injured roots, unplunged they are in a most defenceless state. They are best plunged in cold frames, but as every one cannot command such, the next best plan is to plunge them in beds of ashes elevated quite above the ground level, and cover during frost with long and clean litter, giving the same attention as to a crop of early *Radishes*.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

SWEPT all the walks to free them from fallen leaves, which gave a rubbishy appearance, and having passed the roller over

the most conspicuous, leaves are less inclined to lie upon them. After the high wind of October 27th, we had scarcely a leaf on the pleasure ground, where the grass was short and the lawn firm, and we were glad that some were left in those places where the grass was longer, and even not cleared off where it had been mown. The chief work has been taking up the remainder of the *Carrots*, securing *Endive*, *Lettuce*, &c., earthing-up *Celery*, and keeping fresh plantations of *Cabbages* free from all the enemies that are apt to attack them. We shall as soon as possible clear the stems and old leaves from *Asparagus*, *Sea-kale*, and *Rhubarb*, and make preparations for forcing these requisites. When the ground which the plants occupy can be trenched early, the roots may be carefully taken up now, and set thickly among soil or leaf mould, and covered with litter; they will be fit for use when wanted, and will be convenient in severe frost. Banked up *Cucumbers* in frames, and had litter and grass in readiness to cover up a little all tender subjects in cold frames when frost is expected. As soon as possible will have a piece of *Cauliflowers* under protection, and as we house bedding plants we shall have more room for the useful vegetables that like a little shelter from wet and frost.

FRUIT DEPARTMENT.

See what was said lately on planting fruit trees. A little care exercised now will have a great effect on their future well-doing. Examined stored fruit, and removed all showing signs of decay. Apples are offering to keep well, but *Marie Louise Pears* have kept badly with us, some fine specimens rotting even before they had acquired their full flavour. This might be partly owing to the damp autumn, but then the damp has not affected other sorts in anything the same way, and as yet the Apples look as if they would keep well.

During a wet day or two thoroughly cleaned a vinery, as we did the *Peach-house*, and then filled it with flowering and bedding plants. From the want of houses suitable for such a purpose, the moving of the plants from turf pits, &c., gives an opportunity for cleaning them, and the task of moving, though laborious, saves the work of covering to protect from frost and damp. As recently stated, we have cleared and washed our *Fig* trees in a low pit, and have nearly filled that in a similar manner, as we find when we have *Figs* in November, the first crop in the following summer is more or less injured. We have had the last of our *Figs* from the open wall, and had we time we would now cut off all the young fruit, larger than a small bean. We are still gathering good *Figs* from pot trees in the orchard-house, in which there is an iron stove, and we think of taking some small pots covered with fruit, nearly fully swelled, into a place where they will have more heat and light. *White Marseilles Figs* have as yet been very good, helped, no doubt, by a few sunny days. Late kinds of *Grapes*, as *Calabrian Raisin*, are also ripening. We would reshift some of these orchard trees in pots, and fresh top-dress others, if we could find time. Meanwhile we have moved all the pots to break any roots that might have gone through the holes in the pots, a very simple and effectual mode of root pruning.

We believe that amateurs with time at their disposal may do much and derive a vast amount of pleasure from fruit trees in pots. Our great objection to them is the time taken up in watering, and the only way to lessen that is to mulch several times during the summer. The roots are thus nourished, and the surface soil is prevented from evaporating the moisture too rapidly. A dusting of guano, such as one can manage to hold between the thumb and finger, a double quantity of superphosphate of lime, and a triple quantity of good soot dusted over the mulching of rotten dung on every 12-inch pot will be gratefully received, and will be washed down with the waterings. One thing struck us very much—first noticed, we believe, by Mr. Rivers, and that was the quickness with which a mulching of 2 or 3 inches disappeared, as if the roots and the watering together had eaten it all up. Hence the necessity for mulching several times, if labour with the water-pail is to be at all reasonable in dry weather in summer. Those amateurs who grow fine specimens of *Pelargoniums* and *Fuchsias* in rather small pots, and who are obliged to give them strong waters, and that watering in bright weather several times during the day, would not be annoyed if forced to water their pet fruit trees in pots with equal frequency; but in a general garden where there is much to be attended to, and every half hour has to be made the most of, frequent watering becomes a serious consideration. The system will, however, have charms for the inquiring and the enthusiastic, as every plant is so easily examined, and the varied treatment given is perceptible in its effects. The wood seems all firm and in good condition. We would have put some

Cherry trees in pots out of doors for a change, but we were afraid of the tomtits and bullfinches clearing away the buds. They have had a nibble as it is.

ORNAMENTAL DEPARTMENT.

Most of the places have been overhauled and cleaned except the conservatory, and that we shall attend to as soon as possible, many of the plants that are to replace those to be taken out being in security. Even clean glass and clean woodwork, though deficient in painting, always look well in winter, and keep many evils from accumulating. A few cloths, brushes, warm water, and active hands do wonders in this respect, and *lime-washing* makes the exposed walls clean and sweet. It is always advisable to wash down the walls with warm water before lime-washing, and as we lately remarked, the fresher the lime the firmer will it stick. For damp houses it is of no use applying whitening with size to make it adhere, though doing so would be proper enough in a dry room. We generally tone down this lime-colouring to take off the white glare, but we often use it as white as it comes naturally. For instance, in a late vinery, from which all plants have been removed to avoid damp in the house, the back wall was becoming dingy, slightly green in places, and we brushed over that with limewash to within 4 feet of the top of the wall, doing all the shelves, stages, &c., in the same way, the house now looks almost as clear and bright in a dull day, as it did before in a sunny day, and the black Grapes look all the blacker. In giving such a washing when plants are growing, or even Grapes hanging, it is as well to have air on the house until all scent of the lime has gone. In fact, except in a very frosty night, we never quite close the top ventilators, and that is a great security for keeping Grapes plump and free from damping after this period.

In cleaning houses now that can be emptied of their contents, except the deciduous fruit-bearing plants in them, we have long proved the efficacy of a very simple means of cleaning, and that is, before we begin to wash or scrub, to syringe the whole house, walls, glass, rafters, stages, trellises, Vines, Figs, Peach trees, &c., with water as hot as it can be applied, with a cloth for the man's hand on the syringe. The water is generally from 160° to 180° in temperature, but of course it loses a little of its heat before it strikes on the trees, woodwork, or walls. We have never noticed any trees with ripe wood, and freed from leaves injured by such hot water, and the syringe sends it hot and steaming into every hole and cranny, and to this we attribute a comparative freedom from insects. Of course, such syringing cannot be attempted in a conservatory, where climbers and other plants are planted out and growing, there the glass, &c., must be washed with water under 100°.

When houses become dingy from want of paint, &c., and the glazing is not so perfect as if done by a tradesman, the fault will with propriety be laid on the proprietor; but if the inside of a plant-house, or any other house, exhibits large lumps of dirt, moss, and green slime, depending from the glass or sash-bars, then the fault will too surely be laid on the shoulders of the gardener, and it is really amazing how from becoming used to such a state of things the eye at last ceases to regard it not only as being ugly, but as a proof of careless superintendence. It seems to be incident to human nature, to revert to what has been done, instead of looking to what is to be done. If we arrange a house now, and have all fresh set and clean, we go through it day after day with a degree of self-satisfaction, but we are apt to forget that every day from the cleaning brings us nearer to the day when moving and cleaning must be done, and without the turning out necessary for a great cleaning once or twice a-year. If having once cleaned a plant-house, we continue week after week to look on it as the clean house, other people may see that it is very dirty, and give the right name to its condition.

The cleaning, mowing, and rolling of the pleasure grounds have taken up more time than we could well spare, and most likely we shall have dismantled some of the beds before this is printed, so as to have some plants potted of which we are scarce, and then we will let the rest remain until destroyed by the frost. Many of these plants, as Scarlet Pelargoniums, will do with rough treatment, but everything will succeed best, if taken up before it is much injured by frost, packed in soil as soon as possible, and if tender supplied with a little bottom heat, to set the roots moving at once. A vast number of otherwise clever people have no idea of the importance of never allowing the fibres of a plant to become dry before planting or potting. We lately saw a number of hardy shrubs intended for a particular purpose, taken up very rudely, and left on the ground with all the roots exposed for days, as if intended for faggot

wood to heat ovens. Sometimes with bedding plants taken from beds before a frosty night was expected, we have had comparative failures, because the plants remained stowed up so long before we could trim and place them in pots and boxes.

Bottom Heat.—We may here mention that the few plants to which we could give bottom heat, even from the rank materials of short grass, leaves, and litter, have done very well indeed, and so have the cuttings not forward enough to stand in a cool place without being more fully rooted. This drawback need not be experienced by those whose employers leave them in August or September, or who have reserve grounds whence to take their cuttings; but when it is desirable to have the beds and borders in as good order as can be to the last possible day of the season, and there is no reserve garden, cuttings when taken must be rather small, and they must be taken later and at different times, so that their removal shall not be seen to affect the beds. All these late cuttings we now have where they will be all we want them in a few weeks.—R. F.

COVENT GARDEN MARKET.—NOVEMBER 6.

We can barely maintain last week's quotations, business being very moderate, and the fine weather has added considerably to our stock, both of home-grown and foreign produce. Potatoes have slightly receded in price.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples ½ sieve	2	0 to 3	Melons..... each	3	0 to 5
Apricots doz	0	0 0	Nectarines doz.	0	0 0
Cherries lb.	0	0 0	Oranges 100	8	0 14
Chestnuts bush.	8	0 14	Peaches..... doz.	8	0 15
Currants..... ½ sieve	0	0 0	Pears (dessert) .. doz.	2	0 3
Black do.	0	0 0	Pine Apples lb.	4	0 0
Figs doz.	0	0 0	Plums ½ sieve	4	0 6
Filberts..... lb.	1	0 0	Quinces doz.	2	0 3
Cobs lb.	1	0 0	Raspberries.....lb.	0	0 0
Gooseberries .. quart	0	0 0	Strawberries..... lb.	0	0 0
Grapes, Hothouse.. lb.	1	6 4	Walnuts..... bush.	10	0 15
Lemons..... 100	8	0 12	do. per 100	1	0 1 6

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes doz.	2	0 to 4	Leeks bunch	0	3 to 0
Asparagus bundle	0	0 0	Lettuce..... per score	1	0 1 6
Beans, Kidney, ½ sieve	0	0 3 6	Mushrooms..... pottle	2	0 3
Scarlet Run, ½ sieve	2	6 3	Must. & Cress, punnet	0	2 0
Beet, Red..... doz.	2	0 3	Onions..... per bushel	8	0 5
Broccoli bundle	0	6 1 6	Parsley..... per sieve	3	0 0
Brns. Sprouts ½ sieve	2	0 2 6	Parsnips..... doz.	0	9 1 6
Cabbage doz.	1	0 1 6	Pas..... per quart	0	0 0
Cauliflower..... 100	2	0 3	Potatoes..... bushel	3	0 4 6
Carrots..... bunch	0	6 0 8	Kidney do.	3	6 5
Cauliflower doz.	3	0 6	Radishes doz. bunches	0	9 1
Celery bundle	1	0 1 6	Rhubarb bundle	0	0 0
Cucumbers..... each	0	6 1 0	Savoy..... doz.	0	9 1 6
pickling doz.	2	0 0	Sea-kale basket	0	3 6
Endive doz.	1	0 0	Shallots..... lb.	0	8 0
Fennel bunch	0	3 0	Spinach bushel	2	0 3
Garlic lb.	0	8 0	Tomatoes..... per doz.	2	0 3
Herbs bunch	0	3 0	Turnips bunch	0	4 0
Horseradish .. bundle	2	6 4	Vegetable Marrows, dz.	1	0 2

TRADE CATALOGUES RECEIVED.

J. Jefferies & Son, Cirencester.—*Catalogue of Forest, Fruit, and Select Ornamental Trees and Shrubs—List of Gladioli.*

TO CORRESPONDENTS.

*. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

Books (*A Young Gardener*).—We have a volume now printing on laying out pleasure grounds, both large and small. (*J. W. K. & J. B., Kingston*).—We believe that London's "Self Instruction" is out of print. It is mentioned sometimes in the catalogues of dealers in second-hand books. (*Ignoramus*).—"The Garden Manual." You can have it free by post from our office if you enclose twenty postage stamps with your address.

GARDENERS' EXAMINATION (A. B. Kingston).—You can obtain all the information you need if you write to Mr. Richards, Assistant Secretary, Royal Horticultural Society, South Kensington, London, W.

VARIEGATED SAVOY (J. C. W.).—Variegation in the Cabbage tribe and in many other genera of plants has been more than usually prevalent this year. We discussed the subject when noticing the variegation in *Polygonums*. The prime cause is yet unexplained.

LEGALITY OF WARNING.—"If a gardener whose agreement with his employer was a month's notice on either side, receives his wages weekly, and that employer gives the gardener a month's notice at five o'clock in the afternoon, is that notice legal? or could the gardener at the end of that month give the employer a month's notice, and, if discharged, claim a month's wages? I have always been under the impression that the notice must be given before twelve o'clock in the day.—A *Senschenin*, L."

[We know of no law that prescribes that a warning, like a marriage, must be before twelve o'clock. Moreover, we are quite sure that if there were such a law, and you were to act as you suggest, it would be one of the most erroneous acts of your life.]

CHISWICK GARDEN (Alpha).—Write to Mr. Barrow, the Superintendent of Chiswick garden, and he will furnish you with the necessary form to fill up. There is no premium required, and your chance of getting a situation will depend on your qualifications.

DUTY FREE TOBACCO.—We have inquiries where this can be purchased in small quantities. It would be worth a seller's while to advertise it, stating price and quantities that can be bought.

GARDEN ENOISE.—LEECHES (E. S.).—The cheapest is the hydropult. The leeches on your wall must come out of some water near your garden. They are probably of the *Goobella trochilii* species, which frequently come on to the land to attack the earth-worms.

CHEIRANTHUS MARSHALLI (An Ignorant Subscriber).—It is a hybrid, the result of a cross between *Cheiranthus oehroleucus* and *Erysimum Peroffskianum*. It was raised in 1846 by Mr. John Marshall, of Limbourn, the *Erysimum* being the pollen parent. Its birth place, therefore, is Scotland. Your variegated-leaved specimen (probably of no value), is not an exotic, but a sport. An "exotic" is a native of a foreign country.

APPLES FOR EXHIBITION (An Exhibitor).—*Desert*: Adams's Pearmain, Cox's Orange Pippin, Golden Reinette. *Kitchen*: Blenheim, Dumelow's Seedling, Alfriston.

SOWING WHITE CLOVER (C. A. J.).—We have known it sown very successfully in autumn; but it is now too late. Sow it over your pasture early in March, and run a light roller over it afterwards.

GREEN ROSE (D. W.).—This green Rose was introduced about eight years since by Messrs. Guillot & Clement, of Lyons, under the name of *Rosa viridiflora*. Seven years since we know it was cultivated in this country, and was then called *Rosa Deugale* vert.

ROSES FOR WALLS (An Old Subscriber, Darenty).—"I advise the 45 feet of wall, 8 feet high, with west aspect, to be filled up with hardy free-blooming Roses. The following, of which the colours can be seen in the catalogues, may be selected from:—*Duc de Cazes*, *General Jacqueminot*, *Baronne Provost*, *Marguerite du St. Amand*, *Charles Lefebvre*, *Prince Camille de Rohan*, *Madame C. Crapet*, *Senateur Vaisse*, *Madame Alfred de Rougemont*, *Sir J. Paxton*, *Madame Louise Carique*, and *Anna Alexieff*. The 135 feet of wall, with south aspect, I should mainly devote to noble yellow Roses, such as *Celine Forestier*, *Gloire de Dijon*, *Lamarque*, *Solfaterre*, *Triomphe de Rennes*, and *Maréchal Niel*, placing between them for variation of colour *Duc de Cazes*, *Prince Camille de Rohan*, *Senateur Vaisse*, *Charles Lefebvre*, and *General Jacqueminot*. My frontage, which is a long one, is filled with some of the above yellow Roses. Under the windows are Tea Roses—*Elise Sauvage*, *Souvenir d'Elise*, *Sombreuil*, *Devonensis*, and *Rubens*. In front of them on the lawn, and bunched on Manetti stocks, are these coloured Roses—namely, *Maurice Bérardin*, *Prince Camille de Rohan*, *Duc de Cazes*, and *Charles Lefebvre*. Some of the yellow Roses named above, such as *Solfaterre*, *Lamarque*, and *Celine Forestier*, must, as the wall is low, have a wide berth, as they are very strong rampant growers.—W. F. RADCLIFFE."

HEATING BY A STOVE (F.).—The stoves you mention, when used without a flue, are generally supplied with prepared charcoal fuel, and when set in large halls, with plenty of air and ventilation, do little harm; but even with that prepared fuel we have no faith in any stove when set among tender plants. They will then do injury, though of course not so much as open braziers of burning charcoal prepared or not prepared. To other inquirers we may say, that of stoves with prepared fuel we would have preferred Hay's, but there seems some difficulty in obtaining the fuel; but even in that case we would have preferred a small pipe from the top of the stove leading into the open air outside of the house. There is always likely to be a little uncertainty in stoves with prepared fuel. Suppose you are out, or cannot procure the fuel in a frosty night, then where are you? We would rather advise you to depend on common fuel, as clean cinders, dried coal and coke broken rather small, and then Joyce's or any other little stove will suit your purpose if you take a two-inch pipe from it, or a little wider if you like, through the glass roof, and that is simply done, as was said the other week, by placing a plate-iron square with a hole in it in lieu of a square of glass. With such a pipe, and generally a six or a nine-foot length of a metal pipe will do, there is no danger from any iron stove with common fuel if the sides of the stove do not become too hot. It would be safest to keep the stove in the house from the end of October until May. In a late number you would see what can be done with gas. The stove may be an attractive object, or be placed out of sight, and it will do its work quite as well. The building a small shed against the back wall of the greenhouse, placing a stove in the shed, and merely taking a pipe through the wall, and then through the roof of the house, would not keep the frost out of the house, as the pipe from such a stove cannot be taken any distance in a horizontal position. Such a plan would save you all annoyance from the sight of the stove, dust, smoke, &c.; but you would heat the shed more than your greenhouse. Your proposed plan prompts us to say how you may succeed. Make as large an opening in this back wall as will allow your stove to stand in the opening with 3 or 6 inches free all round it. Protect this little chamber from the air of the shed, and allow nothing of the stove to appear in the shed, except the part where you feed the fire and take out the ashes, and the heat then will mostly pass into your house, helped by the smoke funnel you will need. To make the heat available, keep the stove black and the walls in the opening all

round it white. Did we, however, go to the expense of a little shed behind this greenhouse, 20 feet long by 10 feet wide, we should take no trouble with an iron stove, but would have a small flue, from 4 to 6 inches wide inside measure, carried along and taken back where the pathway would be, the tiles that covered the flue thus making a pathway pleasant to the feet in a frosty day; and such a little furnace and flue, and small iron or earthenware chimney, would cost no more, we presume, than an iron stove. We have frequently stated how to obtain a moist heat from iron stoves. Where neatness and economy in small detached houses are to be combined, we prefer a small flue, the top of the flue forming part of the floor.

ATMOSPHERIC GAS STOVE (W. L.).—We do not know the stove you mention.

STOCKS FOR ROSES (G. Flora).—"I have not tried the *Sempervirens* *Rose Felicité Perpetue* as a stock. I can, therefore, only guess. I should think that it would suit any or most of the strong-growing Roses among the hardy *Perpetuels* or *Noisettes*. There is no China *Rose* worth keeping, except the beautiful Mrs. Rosanquet. It would probably suit 'FLORA,' as it is a flue grower.—W. F. RADCLIFFE."

INSECTICIDE (An Irish Subscriber).—The proprietors are Messrs. Fowler, 84, North Street, Brighton. Directions for using are on the stone bottle.

SMOKELESS STOVE FOR HEATING GREENHOUSE (Young Amateur).—We do not know of a smokeless stove that would heat a house 16 feet long by 10 feet wide, unless you could heat it with gas. We should be obliged by information from any of our correspondents and readers giving their experience of a flueless stove, and if not so, at least a smokeless one. There are many small houses attached to amateurs' residences, for which a smokeless heating apparatus is very desirable, and we think many are deterred from having such structures because they cannot keep out the frost in winter without having an unsightly smoking chimney.

LILIUM AURATUM BULBS DECAYING (Idem).—Your bulbs were no doubt damaged in some way, or they might have been kept a long time out of the ground, which would cause them to decay when they came in contact with wet soil. Those that have lived and flowered will in a year or two become strong. As to culture, see answer to a correspondent at page 265.

PEARS FOR AUTUMN (Idem).—*Beurré d'Amanlis* (September and October), *Harcot's* incomparable (October, November, and December), and *Beurré de Capiaumont* (October). If you require a larger Pear than the last, *Beurré Diel* will suit you; but it is not in use until November. *Lenox* *Bonne* of Jersey, though not a very large Pear, is one of the very best October Pears. They will succeed as espaliers.

FERNS IN WARDIAN CASE (R. C.).—Ferns in a case should first of all have good drainage secured, by putting at the bottom an inch of broken pots, and over these an inch or two of pieces of charcoal not larger than a Walnut, the fine particles being cleared out by sifting through a sieve having a quarter of an inch mesh. Over this again may be placed a little sphagnum, or, failing the sphagnum, an inch of the rougher parts of the compost will answer quite as well. You may then place from 3 to 6 inches of compost, in which the Ferns are to be planted, and it may consist of two-thirds sandy fibrous peat, and one-third turfy yellow loam. To these may be added one-fourth of the whole sandstone broken in pieces from the size of a Pen to that of a Hazel nut. The small stone need not be sifted out, but the whole mixed with the peat and loam, adding also a liberal sprinkling of silver sand. If peat cannot be had, cocoa-nut refuse dust will serve equally well. In this the Ferns should be planted, and a good watering given. It is necessary that the Ferns have the temperature essential to their healthful development. If you plant stove kinds they must have a temperature of 55° in winter, and not exceeding 63°; whilst greenhouse kinds succeed in a Wardian case in any room from which frost is excluded, and hardy Ferns do well in a case in a room without a fire. The windows of the case should be kept closed for the greater part of the day and night; but should moisture condense within the case in such quantity as to make the fronds wet, the case lights may be opened a little, so as to cause the dissipation of such accumulated moisture, and should be closed so soon as the glass becomes dry.

VINE AND VINE-BORDERS.—"G. H." wishes to say that his letter was in our hands before Mr. Thomson's reply was published.

MAKING MUSHROOM-BEDS (Nemes).—We have given so full directions as to making Mushroom-beds lately under different circumstances, that we must refer you to previous numbers; but if you will tell us where you intend making your bed, in-doors or out of doors, in a shed or heated house, and the materials at your command, we will tell you in a few sentences how to make the most of your circumstances. Without a knowledge of these, we might write a long article and not meet your case, and only weary other readers who do not like too much of one subject. You can have a neat orchard-house against a wall 8 feet high, but if you could make it a foot or two higher at back and have the ventilators there it would be better, then your lean-to might be 11 feet wide and 4 feet in front. You cannot do much in forwarding fruit in an unheated house, so as to obtain the high price you name. To do so you would require to heat it. For specific directions send for "Greenhouses for the Many," from our office, which you can have for seven postage stamps.

REPOTTING PEAR TREES (C. M. Major).—Your Pear trees in 11-inch pots, and requiring potting, cannot be potted too soon, pressing the soil firmly round a pot of the next larger size, and plunging it so as to get the roots in the new soil early. Go on as Mr. Rivers advises with pruning. If the spurs are too close together, then thin. We have done this just as soon as the fruit sets thickly.

HOT-WATER SUPPLY CISTERN (J. F. C.).—You must have a supply-cistern somewhere, but most likely the firms referred to will have the supply-cistern near the boiler, and then you will need no supply-cistern at the farther end of your pipes, but it will be advisable to have a small air-pipe fastened on there, which, if open, should be 2 or 3 feet higher than the supply-cistern, and may as well be out of the house.

WATERPROOF COVERING (One of Limited Means).—We cannot give you the exact price of such waterproof material as was referred to in "Doings of the Last Week." Some years ago very good waterproofed calico for such purposes was sold by Mr. Richardson, of the New Road, at a slight advance on the common unbleached calico, and several times recently the receipt has been given to make such material waterproof by boiled oil, a little beeswax, and driers. Stout cloth can easily be made waterproof in summer by a mixture of tar and oil, but it could not be dried now. We

used to have advertisements of stout, pliable, waterproof material, that was scarcely more than double or triple the price of mats, and then that covering would be much cheaper than mats. A mat is a very good protection from frost so long as it is dry, but when once it is wet and clings to the glass, it loses much of its protective power. When rolled off and on when wet, mats soon break and rot; the strands cling firmly together and thus lose their protective power. A single mat will only protect from a slight frost. When at all damp it will require several thicknesses of mats to keep out the frost from a cold pit or frame, and it is anything but pleasant for an amateur to dangle them about when dripping wet. Even if mats are used they will last much longer, and be more effectual, when kept dry, and a light flexible material will do that effectually, and do more than anything else to secure plants from damp in winter. We have no doubt when the importance of keeping protecting material dry is sufficiently looked at, even in an economical point of view, that we shall have plenty of waterproof material to choose from at a very reasonable price. Cotton is not yet so cheap as it was, or strong calico 2 yards wide would be just the material to waterproof for common frames. A pit from 9 to 18 feet long or more could then quickly be covered, if the piece was fastened to an 8-foot pole at each end, and these poles secured to the wall-plate at each end, the cloth being hung by a loop every 4 feet or so, back and front. Thus held tight, even common calico will throw off much water; when waterproofed the glass and all below it will be kept dry, a matter of first importance as a protection against frost, and a protection against as had an evil—damp. After having used almost every makeshift protection, we would unhesitatingly recommend as the cheapest by far in the end, not for a year, but when a few years are looked at, neat wooden covers made of three-quarter-inch wood, with a ledge all round to keep a space of fully an inch between the wood and the sash-bars, and the next best would be waterproofed textile material, even though at first it was several times the price of a mat.

GYMNOSTACHYUM VESCHIAFFELTII (J. D.).—This plant is a native of Brazil, and requires a stove temperature. It is of a rather dwarf, half-trailing habit, and its leaves are veined and netted with red. A compost of two-thirds turfy sandy peat, and one-third leaf mould and sandy loam in equal parts, with a free admixture of silver sand suits it well. A few lumps of charcoal mixed with the compost will help to keep it open. The pot should be well drained. The plant must have a moist atmosphere and abundant supplies of water when it is growing, but it should be kept rather dry when at rest. A light and airy situation suits it, and it should be placed in a position near the glass and not shaded by adjoining plants.

BOUGAINVILLEA SPECTABILIS (Idem).—So far from its being a free it is a shy-flowering plant. It is of strong vigorous growth and makes very long shoots, and on that account may be termed a climber. It succeeds in a cool stove or warm greenhouse, and in a compost of turfy loam two-thirds, and one-third leaf mould or turfy peat. Liberal supplies of water should be afforded when growth is being made, but afterwards the plant can hardly have too little so long as the foliage is not affected. Too much light cannot be given, and the nearer the plant is to the glass the better, providing its shoots do not touch it. Free drainage must be afforded.

AMARYLLIS AND CALADIUMS IN WARM GREENHOUSE (Tillside).—You may grow Amaryllises and Caladiums in a warm greenhouse, if they are started and forwarded in heat, but the Caladiums must have a warmer place than a greenhouse in winter, they requiring a stove. Half a dozen good Amaryllises are—*A. alba fulgens*, Prince of Orange, *Margarita venusta*, *Johnsoni superba*, *Magnifica*, and *Croccea vitellina*. Six of superior merit are Queen of the Netherlands, Fair Ellen, Madame Rachel, Stephenson, Bella Donna, and Souvenir d'un Ami.

PLANTING GRAFTED VINE (Idem).—Providing your Vine is not worked high on the Black Hamburgh stock, plant so that the union of the stock and graft shall be covered with soil, but if the junction is some distance from the place whence the fibres first spring, do not plant deeply with the view of covering the junction. In no case plant more deeply than is sufficient to cover the roots with 2 or 3 inches of soil. Deep planting is more injurious than beneficial, and ought to be avoided.

MIMOSA BUDDING (C. A. J.).—You do not say what species of Mimosa you grow. If it have a number of eyes below the point to which you wish to cut it down, you may safely perform the operation. We do not know of any species of Mimosa that is hardy. *M. prostrata*, a greenhouse plant, is the hardest we have cultivated, but it will not endure frost.

USE OF GLASS STRUCTURE (*Vitis vinifera*).—It is hard to say how your house would best repay you the outlay. We think your idea of planting six Vines in the front would be the best, but they will not repay you in three years. You might have upright Vines in pots as thick as you could place them, but this is not a plan desirable for early forcing, or even forcing at all. Your next idea we do not see the propriety of, as Vines and Peaches do not force well together. Your next proposition we think the best—viz. to have Peaches, diagonal cordons, on the back of the house, and Peaches in pots from the pathway to the front lights. This we think a good idea and likely to prove remunerative. The last notion would also pay, and you might have hit on a less likely plan, only Pines are longer in fruiting than either Vines or Peaches, but you could to a certainty have both Vines and Pines. It requires skill to work them satisfactorily together, and that we fear will not be found in the lad you appear to depend on. Roses, we think, would not pay you to force or propagate.

FINE-FOLIAGED PLANTS FOR A FLOWER-STAND (Inquirer).—Caladiums will not do, and they will not long succeed in a greenhouse. They are stove plants. You might employ the variegated Begonias in summer, and they will do tolerably well in a greenhouse, and so will some kinds of Dracenas. Eight plants that would answer are—*Saxifraga sarmentosa*, *S. Fortunei*, *S. tricolor*, *Sedum Sieboldi* variegatum, *Veronica Andersoni* variegata, *Hydrangea japonica* variegata, *Bambusa Fortunei* variegata, and *Phloxium tenax*. If you do not care for more than one of a genus, then in place of two of the Saxifrages, you may substitute *Dracena australis* and *Farfugium grande*. They are all nearly hardy, but not quite so except in warm situations.

PUTTING IVY-BERRIES IN ROUGH CAST (Ivy).—Your idea is certainly novel—namely, mixing the berries with the rough cast with which the wall is to be covered. The Ivy-berries, if the rough cast is to be made of a consistency to adhere to the wall, will not vegetate. You will succeed by planting strong plants at the foot of the wall in good, light, open, rich soil. Ivy does not injure the walls against which it is planted, but keeps many an old wall up.

DESTROYING WHITE FLY (Reader, Lancashire).—This very troublesome pest is not easily cleared off, though it is speedily destroyed by tobacco smoke, but on commencing to fumigate the pest falls on the floor and is there comparatively safe from the effects of the smoke. On this account, prior to fumigating, we make the floor of the house quite wet, taking care not to wet the foliage of the plants, and we then fumigate with tobacco effectual. The fumigation should be frequently repeated. Syringing with a decoction of 2 ozs. of ground tobacco to every gallon of water is an effectual remedy, but some plants are injured by it.

POTTING BLANDFORDIA CROCEA (H. A.).—Plants of this may be shifted from thumb-pots into those 4 inches in diameter, using a compost of two-thirds turfy yellow loam, and one-third peat or leaf mould, with a free admixture of sand, and plenty of drainage. After potting give a good watering and place the pots in a light and airy situation in a greenhouse. It is sufficient to keep the soil merely moist when the plants are at rest, but when they are growing they can hardly have too much water; when they cease growing the supply of water ought to be lessened and the plants have full exposure to the sun's rays.

POSITION OF FERNS IN GREENHOUSE (L. P.).—The Ferns you name should at this season be well exposed to light, and will probably succeed on the stand at the back, which will undoubtedly be the best position for them in summer, whilst in winter they will succeed admirably on the front stage if not exposed to cold drying currents of air. They will not succeed under the stage, as the drip from the plants on the stage will destroy them. Your house must be kept at something more than a greenhouse temperature to winter safely Gold and Silver Ferns. Ferns require shade from bright sun from March to October, but not great shade.

DENDROBIUM NOBILE CULTURE (A. C. C. H.).—It thrives in a pot rather large for the size of the plant, one-third filled with pieces of broken pots; use a compost of equal parts of sphagnum, turfy peat, and charcoal in lumps from the size of a Hazel nut to that of Walnut. The sphagnum should be chopped, the whole of the ingredients well mixed, and a liberal addition of silver sand given, equal to about one-sixth. The soil should be raised in the centre of the pot above the rim, and the roots of the plant should be covered with sphagnum. The plant is best potted in spring when it commences growth. It is necessary that the soil be made rather firm. It succeeds in a house having a winter temperature of from 45° to 50°, it being then kept dry and fully exposed to light. The dryness must not be so excessive as to cause the stems to shrivel. When the plant has flowered (as it will do in spring if strong enough, and the growth of preceding years is sufficiently ripened), and commences growth, it must have a moist atmosphere, shade from bright sun, and a sprinkling overhead at least twice a day, but any approach to saturating the compost should be avoided for a time, or until the plant is fairly in growth, when it can hardly have too much moisture. This should be continued until it ceases growth; then lessen the supply of moisture, and expose fully to the sun's rays. A temperature of between 60° and 65° at night, and from 75° to 90° by day, is not too much during the season of growth. It will be benefited by guano or any description of manure applied to the compost.

POTTING-OFF PELARGONIUM CUTTINGS (T. M. N.).—We have neither time nor room to spare for the potting-off of Pelargonium cuttings in autumn, and we, therefore, keep the majority in boxes or their cutting-pots until February or March. As you have only windows to winter them in, we would leave them in the pots, pans, or boxes they were struck in until spring, and then pot them off. They will winter more safely than they were they now potted off, and take up less room. Your cellar will, no doubt, answer for the preservation of old Pelargonium plants in winter if frost be excluded. They should not on any account be watered. The soil cannot be kept too dry.

CUTTING-BACK MOSS ROSE (Idem).—Your weak Moss Rose will be improved by cutting it closely in to two or at most three eyes, and you may do this early next month, or now if the leaves have fallen. If the wood is soft and immature, the beginning of March would be a better time to prune. Vegetable Marrows will succeed in the situation you name, if the tall fence gives shelter and does not shade the spot where the Vegetable Marrows are planted. They cannot have too warm and sunny an exposure.

FRUIT TEES FOR GARDEN WALL (W. B. R.).—Your walls 50 feet long will afford room for three trees on each of the aspects. Against the wall of which the aspect is south by east, you may plant Jefferson, July Green Gage, and Cox's Golden Drop Plums; against that with a west by south aspect, Marie Louise, Glou Morceau, and Albertine Pears; and on the east by north aspect, Cox's Pomona, Cox's Orange Pippin, and Cellini Apples.

ASPLENIUM MONANTHEMUM PROLIFERUM (J. J. H.).—It is not uncommon for this Fern to become profligate when aged. We have had many instances of its becoming profligate. We have for many years grown the species, and have found it become profligate under conditions favourable to its abnormal development.

REMOVING DEAD FRONDS OF PLATYCERIUM ALICORNE (Idem).—The circular disks, as you term them, are the barren fronds proper of this Fern, and it is quite immaterial whether they are removed or not. We usually remove them when we can do so without injury to the plant; but in most cases we find the roots densely clustered behind them, and even adhering to them, so that their removal would be very injurious.

GRASS EDGING NOT GROWING (H. C. L.).—If you were to have the ground where the grass edgings are, well and deeply trenched, working in a liberal dressing of manure, and fresh turfed, we think the edgings would grow well; but you must not raise them more than an inch or so above the walk, nor cut them more than once a year. This has nothing to do with the clipping of the edgings, which of course will be done every time the grass is mown. We presuppose that the soil where the edgings are is good, and that they are not walked upon, nor suffer from any substance that may be put upon the walks from time to time to destroy weeds. We have no recollection of the name of the advertiser of Roses about whom you inquire.

RHODODENDRONS FOR COVER PLANTING (An Old Subscriber).—You will best attain your object by advertising for what you require, stating quantity and size of plants. Now is a good time to plant Rhododendrons, and they may safely be planted up to May; but if you plant whilst the trees are leafless there is everything to hope for, as the plants will have made some progress at the roots before the trees have made any great

number of leaves, and to a great extent warded off rains from the rhododendron roots. The earlier you plant after the leaves of the cover trees have fallen the better.

WINTERING FUCHSIAS (R. A. B.).—Your plants with the leaves quite green should not have more water after this than a little now and then to prevent their drying up and the wood shrivelling. You cannot keep them too dry, only the foliage must not be allowed to flag; but we presume it will soon fall. In that case give no water beyond a little occasionally when the soil becomes almost dry, in order to keep the wood from shrivelling. The plants must be kept from frost. In February, or early in March, you may cut the shoots back, leaving an inch or two of last season's growth to all the shoots shortened, and when the plants have made fresh shoots an inch or so long you may shift into pots 9 inches in diameter, removing most of the old soil, injuring the roots as little as possible. After potting the plants should be kept moist and shaded for a few days until the roots are working freely in the fresh soil. When the shoots are from 3 to 6 inches in length stop them, keeping an eye to the formation of symmetrical plant, and in a few days you may give them their blooming-pots, which will, of course, be regulated by those they are to be exhibited in. The shoots should not be stopped after the end of May, or from six to seven weeks prior to the time of exhibition.

NAMES OF FRUITS (E. H. D.).—It certainly is not Louise Bonne of Jersey, but a worthless variety which we cannot identify. (*Oscar*).—1, Drap d'Or; 3, Scarlet Pearmain; 5, Eyewood; 7, Delawar; 8, Selwood's Reinette; 9, Nelson Codlin; 10, Apple, Dumelow's Seedling; 10, Pear, Winter Nellis; 11, Apple, Russet Table Pearmain; 11, Pear, Vicar of Winkfield; 12, Beurré Lombard; 16, Henriette Bevier; 22, Winter Greening; 23, Beurré Bose; 25, Dumelow's Seedling; 27, Russet Nonpareil; 41, Gendebien; 42, Beurré Lombard; 45, Duchesne d'Angoulême; 47, Beurré Diel; 56, Louise de Prusse; 80, Easter Beurré; 90, Black Worcester. (*S. F.*).—Pears: 1, Brown Beurré; 2, Seckle; 3, Winter Nellis; 4, Bezi de Calsoy; 6, 7, Passe Colmar. Apples: 5, Lamb Abbey Pearmain; 8, Court of Wick; 9, Scarlet Pearmain. No. 1 is the well-known Brown Beurré, more highly coloured than usual. (*H. B. M.*).—Pear rotten. (*J. B. P., Chichester*).—Pears: 1, Chaumontel; 2, Not known; 3, Passe Colmar; 4, Gloa Morcean; 5, Not known. Apples: 1, Margil; 2, Blenheim Pippin; 3, King of the Pippins.

NAMES OF PLANTS (C. Leggere).—*Polygonum ovatum*. (*Rustie*).—1, *Quaroclit vulgaris*; 2, *Equisetum* sp. (*John*).—1, *Sedum Sieboldi*; 2, (*Florists' flower*). (*An Ignorant Subscriber*).—*Pteris palmata*. (*T. C.*).—*Teneria chamaedrys*. (*J. Nobil*).—1, *Medicago ciliaris*; 2, *Gesnera Herbistii*. (*Try*).—Must wait till next week; the plants being without flowers are difficult to determine.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending November 5th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 30	29.982	29.874	57	45	54	52	S.W.	.00	Overcast and damp; overcast; rain at night.
Thurs. 31	29.901	29.877	59	43	54	52	W.	.06	Overcast and mild; cloudy and fine; overcast.
Fri. . . 1	30.010	29.857	65	32	53	52	W.	.00	Overcast; fine; clear at night.
Sat. . . 2	30.469	30.227	52	24	51	52	N.	.00	Clear; bright sunshine; clear and fine at night.
Sun. . . 3	30.485	30.896	51	32	50	50	W.	.00	Heavy fog; clear; overcast at night.
Mon. . . 4	30.190	30.219	53	33	51	50	W.	.00	Overcast throughout.
Tues. . 5	30.252	30.222	48	24	49	51	N.E.	.00	Clear; clear and fine; clear and frosty at night.
Mean	30.184	30.093	55.00	33.28	51.71	51.11	..	0.06	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

DELUDING BROODY HENS.

How often we hear the question asked, "What am I to do to cure a hen of her broodiness?" What numerous recipes we have in our poultry books, most of them harsh, many of them cruel, for compelling the poor hen to relinquish her natural propensity! All I think miss their object in that they try to oppose nature. It is natural for certain kinds of fowls to become broody, and let me ask, What is the object Nature has in view? Is it not that the hen may hatch chickens?

Now, have any of your readers ever sat a hen almost immediately after she has become broody, and caused her to hatch the eggs on the following day? If they have not, I have. It happened in this wise. Last year I had a Light Brahma hen sitting on a batch of eggs, when, to my dismay, on taking her off the nest for the purpose of feeding, the morning before that on which I expected her to bring out, I found the poor thing suffering from vertigo to such an extent, that after tumbling about for some time she at last lay sprawling upon her back in the middle of the yard. I saw at once that it was of no use expecting her to sit out the eggs, and had just made up my mind to a certain loss of the whole batch, when my little daughter who was with me said, "Papa, my hen was clocking yesterday, perhaps she will sit them out." Happy thought, worth trying; and soon the little maid came hugging a great Brahma hen, which she called her own, across the yard. "Cluck, cluck," went the old lady when she saw the eggs; and after a little gentling and smoothing of feathers, we soon had the satisfaction of seeing her screw herself down upon the eggs, and settle "quite old-fashioned," as little missy remarked.

Next day the eggs were hatched, and on the day following that they marched out an apparently happy mother and a dozen chicks, for she took to them as kindly, or, perhaps, for aught I know to the contrary, more kindly than she would have done had she had a three-weeks sitting bout.

Here, then, was an instance of a hen laying eggs to within a few days of her hatching and rearing a brood of chickens. But you will say, What of all this? what does it prove? It proves this, that although nature has prescribed three weeks as the time of incubation, there is, nevertheless, no necessity that a hen should sit more than one-twentieth of that time to qualify herself for bringing up the chickens.

And now, let me ask, when eggs are hatched and the hen has had the care of the chicks for two or three days, what will

be the result if she is deprived of them entirely? Will she go and commence sitting again? No; never, in my experience at least, have I found her do so, although I have removed chicks almost directly after they were hatched. She will cluck about and look very miserable for a few days, but that is all; for, like a sensible being, she makes the best of it, and generally begins to lay again in the course of a fortnight or so; and this, mind, holds good whether she has sat on the eggs for the whole, or for only a portion of the three weeks.

Allow me one other anecdote from my little poultry world to further show how I came to adopt my present system for overcoming broodiness. I had three Bantam chickens whose mother had left them, that were housed at night in a small building by themselves. In this place a Brahma hen took it into her wise noddle to commence sitting upon no eggs at all, as Brahmas and Cochins constantly do. About a couple of days after the commencement of this sitting bout you may judge my astonishment at seeing her ladyship strutting proudly down the yard with the three half-grown Bantams at her heels, running to her "clucks," and evidently enjoying the tit bits she offered them from time to time. She had adopted them, in fact, and, after remaining with them for a fortnight or three weeks, left to commence laying again. Many a laugh we had at the way in which the old hen had been taken in by the Bantams. Our most approved theory was, that, catching her napping, they had nestled under her for warmth, and she on waking up in the morning fancied them the fruits of her sitting and was satisfied. However it might be, here at any rate was another instance of her nature being satisfied with the result notwithstanding the absence of the three-weeks incubating process.

The whole thing seemed so curious, that I began to think whether it might not in some way or other be turned to account for curing hens of their broodiness in a manner not repellant to the nature of the bird, but, on the contrary, to a great extent in accordance with its laws. The Bantams had imposed upon the hen, and it was only for me to do the same by others, and upon these principles I founded my system. It is one entire imposition—a pious, or some will say, perhaps, an impious, fraud upon the sitting lady.

If I do not want a hen to sit, as soon as I find her thoroughly settled down I take two or three of the youngest chicks I have at the time (most yards of any size are supplied with some at the time of year hens are most broody), from under their mother, and place them after dark, and unseen, under the hen that is broody. Finding all warm and comfortable, the little ones at once nestle among the feathers and remain quiet until

morning, by which time the hen has become accustomed to and accepts them as her own. A feed at daybreak on the nest completes their acquaintance, and then I leave them. It is not long until the hen is seen stalking off with her two or three adopted chicks happy and contented. At the end of three or four days or so the chicks are taken away and placed again under their own mother, leaving the mother of their adoption disconsolate, certainly for a time, at the loss, but completely cured of her broodiness.

I must state that my remarks apply especially to Brahmas and Cochins, as I have not tried the system with any other breeds; but as the two named are, perhaps, the most broody of all, if it holds good with them, it is, I trust, of some value.

Next year I intend to try and work out practically a calculation I have made founded upon the above facts, for increasing very materially the supply of eggs by a system of what I may call division of labour—viz., letting one hen do the sitting, and another, taken at the commencement of her broodiness, the rearing part of the business.

I must apologise for having taken up so much space; but as the matter is, so far as I am aware, entirely new, I must plead the novelty as my excuse.—Cos.

IPSWICH POULTRY AND PIGEON SHOW.

THIS Show, which commenced October 31st and closed on the 1st inst., exhibited a most remarkable improvement on that held last year—in fact, we have rarely visited an exhibition so free from inferior specimens of any kind. This shows that a liberal schedule of prizes, combined with a careful management of the birds when in the exhibition-pens, will invariably command an extensive and first-rate entry from even our best poultry amateurs.

Of the Ipswich Corn Exchange it is impossible to speak more highly of its suitability for a poultry show than it deserves, but owing, we are told, to the building having been engaged on the previous evening until 6 P.M., the work of putting up the pens, &c., was much too heavy for the rather limited Committee to complete by an early hour; it is therefore, to be regretted the Arbitrators could not begin the judging until within a few minutes of two o'clock, and, consequently, had not finished their awards until long after nightfall. It would, indeed, be a most excellent improvement, if at the Ipswich Show it could be so arranged that the prizes should be awarded in the forenoon instead of late in the evening. The pens, as some of our readers are, perhaps, aware, were the same as those used at the Royal Agricultural Society's Show of poultry at Bury St. Edmunds, for which meeting they were specially engaged. They are very good, and admit of but little, if any, improvement.

The *Game* classes were of considerable merit, Mr. Samuel Mathew, of Stowmarket, taking the bulk of these prizes with first-class specimens. In *Grey Dorkings* the show was one of unusual excellence. Viscountess Holmesdale sent two pens of *Grey Dorkings*, being, we are informed, her ladyship's last appearance as an exhibitor of poultry that certainly have never been surpassed. By these pens were secured not only the first and second prizes in their appointed class, but also the silver cup for the best pen of *Dorkings* of any variety in the Show. Lady Holmesdale also obtained the silver cup and first prize for the best pen of *Spanish* fowls exhibited, and that with only a single entry. So meritorious a conclusion to Lady Holmesdale's career in the poultry world is a good evidence of the general excellence of the strain of fowls in which she has so long delighted, and the very excellent condition in which they were penned at Ipswich, reflected much credit on the care and attention of her poultry-man, Mr. Martin. The public sale of the whole of these valuable birds which will soon take place at Linton Park, will no doubt be well attended, and most probably the prices realised for some of the most desirable lots, will show the estimation in which poultry breeders hold Lady Holmesdale's stock; also that the number of poultry breeders is rather increasing than otherwise. In *Cochins*, the Whites and Partridge-coloured were the most perfect, the Buffs, with the exception of the pullet classes, being not so well shown as we could have anticipated. Mr. Tomlinson's Buffs which took the amateurs' silver cup a week or two ago at Wolverhampton, again gained the first prize, but since their appearance there exhibited a sad deterioration as regards condition. Mr. Rodbard took the *Cochin* cup with his well-known pen of Partridge birds. R. W. Boyle, Esq., of Dublin, took the silver cup for *Brahmas*. *Hamburgs* were excellent; but the *Polish* classes, though of superior quality, were a very slight entry. *Game Bantams* were good, and the success of the selling classes was extraordinary.

Geese, *Turkeys*, and *Ducks* were shown in very large classes filled with birds from the best breeders in the kingdom. Classes for *Pheasants* gave additional interest to the Show. A large number of Golden, Kaleegee, and Silver *Pheasants* in the most brilliant plumage were shown.

The *Pigeons* were very well worthy of favourable mention, the Carriers, Ponters, Barbs, and the "Any other variety" class especially so. Cage birds of great variety were placed as an upper tier around the whole Show, and did not fail to attract considerable admiration; whilst some very good Angora and Himalayan *Rabbits* seemed scarcely less attractive.

A pair of *Spanish Poodles* (dog and bitch), were entered as extra stock, and for sale, at the fixed price of £25 the couple. They were extremely pretty, but were not claimed during our stay, though they obtained at the hands of the Judges a "very high commendation." Commencing, as we stated, at the very late hour the Judges did, we regretted to find even then that a very large number of pens, many of which were of the highest quality, arrived "too late for competition." This unpleasant result frequently takes place when exhibitors commit the great mistake of forwarding their birds by the last possible train.

GAME (Black-breasted and other Reds).—Cup, First and Second, S. Matthew, Stowmarket (Brown Reds). Third, H. M. Julian, Whitefriargate, Hull. Highly Commended, J. Fletcher, Stoneycough, near Manchester (Brown Reds); Rev. F. Watson, Messing Hill, Kelvedon, Essex (Brown Reds).

GAME (Any other variety).—First and Third, S. Matthew (Duckwings). Second, J. Fletcher. Highly Commended, H. Smith, Scarborough (Duckwings).

GAME (Any variety).—First and Second, S. Matthew (Black-Red). Highly Commended, R. R. Parker, Ipswich (Black-breasted); J. Jeken, Eltham, Kent; Rev. F. Watson (Brown Red); H. Smith (Black-breasted). Commended, R. Close, Kingstown, Co. Dublin (Black-breasted Red).

DORKINGS (Any variety).—Cup, First and Second, Hon. Viscountess Holmesdale, Staplehurst, Kent. Third, D. C. Campbell, M.D., County Lunatic Asylum, Brentwood. Highly Commended, D. C. Campbell, M.D. Commended, B. Lingwood, Needham Market. *Pullets*.—First, D. C. Campbell, M.D. Second, J. R. Jefferies, St. Helen's, Ipswich (Coloured). Highly Commended, H. Lingwood; D. C. Campbell, M.D.; H. Loc, Appuldurcombe, Godshill, Isle of Wight; A. Cobbold, Ipswich; Rev. E. S. Tidderman, Brentwood, Essex (Silver-Grey).

COCHIN-CHINA (Cinnamon or Buff).—First, H. Tomlinson, Meeley, near Birmingham (Buff). Second and Third, H. Lingwood (Buff). Highly Commended, F. W. Rust, Hastings, Sussex (Buff). Commended, H. Yardley, Birmingham.

COCHIN-CHINA (White).—First and Second, G. Lamb, Compton, near Wolverhampton. Third, H. Loc.

COCHIN-CHINA (Any other colour).—Cup and First, J. R. Rodbard, Aldwick Court, Winton, near Bristol (Partridge). Second, T. M. Perry, Gedney (Partridge). Third, H. Lingwood, Bucklesham, Woodbridge (Partridge). *Pullets*.—First, H. Mapplebeck, Woodfield, Mosely near Birmingham (Buff). Second, H. Lingwood (Partridge). Highly Commended, H. Lingwood (Buff); H. Payne, Stowmarket (Buff); J. R. Rodbard (Partridge); H. Tomlinson (Buff).

BRAHMA POOTRA (Any variety).—Cup and First, R. W. Boyle, Bray, Co. Wicklow. Second, H. Lacy, Hebdon Bridge. Third, J. K. Fowler, Prebendal Farm, Aylesbury. *Pullets*.—First, K. Jopp, Aberdeen (Dark). Second, H. Lacy. Commended, J. K. Fowler; W. Adams, St. Clement's, Ipswich (Dark).

HOUDANS, *CRÈVE CŒUR* AND *LA FLÛCHE*.—First, Hon. W. H. Fitzwilliam, Wentworth Woodhouse, Rotherham (Crève Cœur). Second, National Poultry Co., Bromley, Kent (Crève Cœur). Third, W. Tippler, Roxwell, Chelmsford (Crève Cœur). Highly Commended, H. M. Maynard, Holmewood, Ryde, Isle of Wight (Houdans); J. K. Fowler; National Poultry Company (Crève Cœur).

SPANISH.—Cup and First, Hon. Viscountess Holmesdale. Second, J. Wright, Sysonby, Melton Mowbray. Third, Master W. J. Jeffries, Framlingham. *Pullets*.—First, J. R. Rodbard. Second, Messrs. Bowman and Fearon, Whitehaven. Commended, H. Lingwood.

HAMBURGS (Golden-pencilled).—First, F. Pittis, jun., Newport, Isle of Wight. Second, H. Pickles, jun., Earby, Skipton. Third, H. Beldon, Bingley.

HAMBURGS (Silver-pencilled).—First, J. E. Powers, Biggleswade, Beds. Second, H. Beldon.

HAMBURGS (Golden-spangled).—First, T. Walker, jun., Denton, near Manchester. Second, H. Pickles, jun. Third, H. Beldon.

HAMBURGS (Silver-spangled).—Cup and First, H. Beldon. Second, Messrs. Ashton & Booth, Broadbottom, near Mottram, Cheshire. Third, H. Pickles, jun.

HAMBURGS (Any variety).—*Pullets*.—First, H. Pickles, jun. Second, F. Pittis, jun. Third, T. Fenn, St. Peter's, Ipswich (Silver-spangled). Highly Commended, H. Beldon; C. Havers, The Beacons, Ingatstone, Essex (Silver-pencilled).

POLISH (Gold or Silver).—First and Third, H. Beldon (Silver). Second, G. W. Boothby, Louth, Lincolnshire (Silver).

POLISH (Any other variety).—Prize, H. Beldon (White-crested Black).

POLISH (Any variety).—*Pullets*.—First, Mrs. Burrell, Ipswich (Silver). Second, H. Beldon.

GAME BANTAMS.—First and Second, W. F. Entwisle, Leeds. Third, W. Dale, Weston-super-Mare. Highly Commended, J. W. Morris, Rochdale, Lancashire. Commended, F. Bennett (Fries).

BANTAMS (Gold or Silver-laced).—First, T. C. Harrison, Hull. Second, H. Draycott, Humberstone, near Leicester (Silver). Highly Commended, W. H. Tomlinson, Newark-on-Trent (Silver). Commended, G. W. Boothby (Silver).

BANTAMS (Any other variety).—First, H. Draycott (Black). Second, Mrs. Burrell (Sildes). Third, Rev. F. Tearle, Gazeley Vicarage, Newmarket (Black). Highly Commended, Hon. — Paget, Seale, Suffolk (Indian).

BANTAMS (Any variety).—*Pullets*.—First, Rev. E. S. Tidderman (Black-breasted Red Game). Second, E. Prentice, Violet Hill, Stowmarket (Game). Very Highly Commended, Rev. F. Tearle. Commended, W. Turner, jun., St. Mary Elm, Ipswich (Duckwing Game).

ANY DISTINCT VARIETY NOT BEFORE MENTIONED.—Prize, H. Beldon (Black Hamburgs).

SELLING CLASS (Any variety).—First, D. C. Campbell, M.D. (Dorkings). Second, J. Frost, Parham, near Wickham Market (Coloured Dorkings). Third, National Poultry Co. (Crève Cœur). Highly Commended, W. F. Baynham, Blakenham Mill, near Ipswich (Coloured Dorkings); Master F. M. Shaw, Rougham Rectory, near Bury St. Edmunds (Aylesbury Ducks); K. Pashley, Workop (Game). Commended, H. Beldon (Brahmas); Rev. E. J. Toupson, Denham Parsonage, Bury St. Edmunds (Aylesbury); J. R. Jefferies (Coloured Dorkings).

SINGLE COCKERELS.

GAME (Any variety).—First, H. Loc. Second, S. Matthew. Highly Commended, J. Jeken.

DORKING (Any variety).—First, Hon. W. H. W. Fitzwilliam. Second, F. Parlett, Great Baddow, Chelmsford (Coloured). Highly Commended, Mrs. Bailey, Shooter's Hills, near Longton, Staffordshire (Coloured); J. R. Jeffries (Coloured); D. C. Campbell, M.D.

COCCHIN-CHINA (Any variety).—First, H. Lingwood (Partridge). Second, H. Payne, Stowmarket (Buff). Highly Commended, H. Lingwood.

BRADIA POOTRA (Dark or Light).—First, Hon. Miss Douglas Pennant, Ponbury Castle, Bangor. Second, Mrs. M. Seannons, Hartwell, Aylesbury. Bocks. Commended, J. K. Fowler.

SPANISH.—First, Hon. Miss Douglas Pennant. Second, H. Lingwood. **HAMBURGERS** (Any variety).—First, H. Pickles, jun. Second, H. Beldon. Commended, W. Turner, jun. (Golden-spangled).

BANTAMS (Any variety).—First, W. F. Entwistle (Game). Second, Rev. E. S. Tiddeman (Black-breasted Red Game). Commended, J. W. Morris (Black Red Game); Mrs. M. Riley, Onehouse, Stowmarket (Laced).

ANY DISTINCT VARIETY NOT BEFORE MENTIONED.—First, Mrs. Burrell (Silver-spangled Poland). Second, H. M. Maynard (Black and White Poland). Disqualified, W. Tippler, (La Flèche as being an Old cock). Highly Commended, National Poultry Co. (London). Commended, J. K. Fowler; H. Beldon (Poland); R. Pashley; National Poultry Co. (Crève Coeur).

DECKS (Rouen).—First and Third, F. Parlett. Second, E. Leech, Rochdale. Highly Commended, Rev. E. F. Walford; F. Parlett.

DECKS (Aylesbury).—First and Second, Mrs. M. Seannons. Third, Mrs. Burrell. Highly Commended, E. Leech; J. K. Fowler; Rev. C. H. Crosse, Jesus Lane, Cambridge. Commended, W. Tippler; J. K. Fowler; Rev. E. J. Thompson.

DECKS (Any other variety).—First, T. C. Harrison. Second and Highly Commended, E. W. Green, Bury St. Edmunds (Carolina). Commended, P. Pitts, jun. (Black East Indian); J. Cooke, Ipswich (Mascovy).

TURKEYS (Any colour).—First, E. Leech. Second, Master F. M. Shaw. Highly Commended, E. Packard, jun. Bramford, near Ipswich (White).

GREEN (Any variety).—First, J. K. Fowler (Toulouse). Second, H. D. Pastans, Stoke by Nayland, Essex (Emden). Very Highly Commended, Mrs. M. Seannons. Highly Commended, S. H. Stott, Rochdale (Toulouse). Commended, J. Berners, Ipswich.

PEREGRINES (Any variety).—First and Second, F. Waller, Ipswich (Golden). Very Highly Commended, F. Waller (Silver); National Poultry Co. (Kalege). Highly Commended, F. Waller; J. Kirkman, M.D., Melton Suffolk (Golden). Commended, National Poultry Co. (Golden); J. Kirkman, M.D. (Silver); Harpham, Ipswich (Golden).

PIGEONS.

CARRIERS (Any colour).—Cock.—First, R. Fulton, Deptford, Kent. Second, H. Yardley. Highly Commended, R. Fulton. Hen.—First, F. Elze, Brixwater, London. Second, R. Fulton. Highly Commended, J. Fielding, jun., Rochdale. Commended, H. Yardley.

POUTERS (Any colour).—Cock.—First and Second, R. Fulton. Highly Commended, F. Elze. Hen.—First, R. Fulton. Second, J. Fielding, jun. Highly Commended, R. Fulton.

TRUMPETERS (Almond).—First, R. Fulton. Second, P. H. Jones.

TRUMPETERS (Any other variety).—First, R. Fulton (Mottled). Second, P. H. Jones (Mottled). Highly Commended, R. Fulton (Mottled). Commended, H. Draycott.

JACOONS (Any colour).—First, W. Massey, Bromley Kent (Black). Second, J. Hawley, Bingley. Highly Commended, R. Fulton.

FAN-TAILS (Any colour).—First, Second and Highly Commended, J. Hawley. Commended, Rev. F. Watson (White).

TRUMPETERS (Any colour).—First, E. Shearman, Chelmsford. Second, J. Thompson, Bingley. Highly Commended, J. Hawley.

TURKITS (Any colour).—First, F. Elze. Second, P. H. Jones (Red). Highly Commended, J. Hawley; J. Fielding, jun.

BARBS (Any colour).—First, P. H. Jones (Black). Second, J. Fielding, jun. Highly Commended, Mrs. W. Massey (Black); R. Fulton.

MAGPIES (Any colour).—First, J. Fielding, jun. Second, and Highly Commended, J. Hawley.

ANY DISTINCT VARIETY NOT BEFORE MENTIONED.—First, J. Fielding Second, J. Hawley. Highly Commended, P. H. Jones (Owls, Yellow Dragons); J. Hawley; J. Fielding; F. Elze. Commended, H. Yardley.

SELLING CLASS (Any variety).—First, P. H. Jones (Yellow Dragons) Second, J. Hawley. Very Highly Commended and Highly Commended Master W. J. Jeffries (Magpies, Turbitts).

CAGE BIRDS.

CANARY (Clear Yellow).—First, Second and Third, T. Fenn. Very Highly Commended, Highly Commended, and Commended, T. Fenn.

CANARY (Clear Mealy).—First, T. Fenn. Second, Miss E. Jeffries, Ipswich. Third, G. J. Barnesby, Derby. Very Highly Commended, J. Coxer, Ipswich; G. J. Barnesby; G. Y. Collinson, Thorpe Hamlet, Norwich. Highly Commended, G. J. Barnesby. Commended, T. Fenn.

CANARY (Mottled Yellow).—First, Second and Third, T. Fenn. Very Highly Commended, G. J. Barnesby; Miss E. Jeffries. Highly Commended, G. J. Barnesby; G. Y. Collinson. Commended, J. Solomon; G. Y. Collinson.

CANARY (Mottled Mealy).—First, G. J. Barnesby. Second and Third, T. Fenn. Very Highly Commended, G. J. Barnesby. Highly Commended, G. Y. Collinson. Commended, Mrs. R. C. Ramsome, Ipswich; C. Y. Collinson.

CANARY (Mottled Crested Yellow).—First, Second and Third, T. Fenn. Very Highly Commended and Highly Commended, G. Y. Collinson.

CANARY (Mottled Crested Mealy).—First and Second, T. Fenn. Third, and Highly Commended, G. Y. Collinson.

CANARY (Belgian Mealy).—First, G. J. Barnesby. Second, J. Solomon. Highly Commended, G. J. Barnesby.

CANARY (Belgian Yellow).—Prize, G. J. Barnesby.

CANARY (Gold Lizard).—First, T. Fenn. Second and Highly Commended, G. J. Barnesby.

CANARY (Silver-Lizard).—First, T. Fenn. Second, G. J. Barnesby.

GOLDFINCH MULE (Yellow).—First, T. Fenn. Second and Third, G. J. Barnesby.

GOLDFINCH MULE (Mealy).—First, T. Fenn. Second, Miss E. Jeffries, Third, G. J. Barnesby. Very Highly Commended, H. Lyon, Ipswich. Highly Commended, G. J. Barnesby.

MULE (Any other variety).—First, T. Fenn (Linet Mule). Second, F. G. H. Ipswich (Siskin Mule). Highly Commended, G. J. Barnesby (Greenfinch and Goldfinch Mule).

LINNET, GOLDFINCH OR OTHER ENGLISH FINCH.—First, T. Fenn (Ball-

finch). Second and Third, G. J. Barnesby (Goldfinch). Very Highly Commended, F. Gull (Brambling Finch); T. Fenn (Linet).

BLACKBIRD, THRUSH, STARLING, LARK, OR OTHER ENGLISH CAGE BIRD.—First and Second, T. Fenn (Thrush, Blackbird). Third, J. Scrivener, Cornhill, Ipswich (Magpie).

EXTRA PRIZES.—Extra, Miss E. Jeffries (Canaries); T. Fenn (Canaries); W. Turner, Ipswich (Green Canary from the Azores); E. Packard, jun. (Cardinal Birds, imported from La Plata). Very Highly Commended, Rev. F. Toarle (Parrot).

RABBITS.—*Lop-eared*.—First, H. M. Maynard. Second, C. Dowe, Ipswich. *Any other variety*.—First, J. Scrivener (Angora). Second, Master E. L. W. Williams, Harwich (Himalaya). Commended, J. Fielding, jun.

Mr. E. Hewitt, of Birmingham; and Mr. Tegetmoier, of London, were the Arbitrators.

BRIGHTON AND SUSSEX CANARY SOCIETY'S EXHIBITION.

This was held in the Picture Gallery, at the Royal Pavilion, Brighton, October 30th and 31st, and November 1st. The following is a list of the awards made by the Judges, Mr. George Wood, Mr. Thomas Marchant, and Mr. Samuel Hall.

OPEN TO ALL ENGLAND.

NORWICH (Clear Yellow or Buff).—First, W. Walter, Winchester. Second, H. Vine, East Cowes, Isle of Wight.

NORWICH (Variegated Yellow or Buff).—First and Second, J. Garrett, Brighton. Commended, H. Vine.

BELGIAN (Clear Yellow or Buff).—First and Second, J. Garrett.

BELGIAN (Variegated Yellow or Buff).—First and Second, H. Apted, Broadwater, Sussex.

ANY OTHER VARIETY EXCEPTING NORWICH OR BELGIAN.—First, T. Fenn, Cliftonville (Clear Buff-crested Cock). Second, H. Vine (Cinnamon Cock). Third, F. Beal, Brighton (Silver-spangled Lizard Cock).

OPEN TO MEMBERS OF THE CLUB.

NORWICH (Clear Yellow).—First, J. Garrett. Second, H. Apted.

NORWICH (Clear Buff).—First, H. Apted. Second, —Thirkettle, Brighton.

NORWICH (Variegated Yellow or Buff).—First, H. Apted. Second, J. Garrett.

BEST SIX YOUNG NORWICH (Irrespective of Colour).—First, H. Apted. Second, J. Garrett. Commended, F. Beal.

BELGIAN (Clear Yellow).—First, T. Fenn. Second, J. Garrett.

BELGIAN (Clear Buff).—Prize, J. Garrett.

BELGIAN (Variegated Yellow or Buff).—First, H. Apted. Second, J. Garrett.

TURN CROWN.—First, T. Fenn. Second, —Sayers, Brighton.

BEST SIX YOUNG TURN CROWN (Irrespective of Colour).—Prize, J. Garrett.

LIZARD (Golden).—First, F. Beal. Second, H. Apted.

LIZARD (Silver).—First, F. Beal. Second, H. Apted.

CINNAMON.—First, T. Cordingley, Brighton. Second, —Slaughter, Brighton.

CINNAMON (Pied).—First, T. Cordingley. Second, J. Garrett.

GREEN.—Prize, F. Beal.

GOLDFINCH MULE (Pied).—First, F. Beal. Second, T. Cordingley

GOLDFINCH MULE (Plain).—Prize, J. Garrett.

MULE LINNET.—Prize, F. Beal.

MULE SISKIN.—Prize, J. Deuch, Brighton.

TWITE MULE.—Prize, J. Deuch.

BEST SIX OLD BIRDS (Irrespective of Colour).—First, T. Fenn. Second, H. Apted. Highly Commended, J. Garrett.

LORD TREDEGAR'S SHOW AT NEWPORT.

I HAVE to inform my co-memorialists that Mr. Palling's efforts to reduce the enormous Great Western Railway charges for carriage have not been successful. At the meeting at Neath, the authorities there decided to recommend to head quarters the return of unsold birds free of expense, but the very sapient rulers of this ill-fated railway decided that they would do nothing of the sort, adding, that "it was not their custom," and appearing to think it would be invidious to select Newport as an exception. Custom or not, certainly some few years back they returned mine as "empties" from that Show, and, I write doubtfully, but I think in the case of the Bath and West of England Show, at Bristol, they also did the same.

I have been asked by some of those who signed that memorial, what I intended to do. I reply that we signed a memorial expressing our determination "not to exhibit again at Newport, unless some relief was obtained." To that determination I, for one, shall adhere. I trust all my fellow memorialists will do the same. It may be possible then to prove to the authorities, that "half a loaf is better than no bread," and even to make this fact patent to the rather dull intellects of railway powers. They do not appear to be capable of understanding much, and seem to have a belief that ten baskets at 4s. are better than thirty at 2s., the expenses of carriage being equal, and passenger traffic, of course, being no object. Let us, at any rate, try and show them their mistake, and if, as I believe they will, the entries fall short, I will endeavour to let the authorities see the valuable results of their policy.

In the present instance I deeply regret having to come to such a decision as the above, for Newport was the second place

I ever showed at, when really the exhibition was merely "a few fowls." I have watched its growth, have made suggestions in the schedule, that have been duly carried out, and it seems almost like breaking off with my "first love." The Great Western Railway, however, leaves me no other alternative.—Y. B. A. Z.

EXCLUDING THE QUEEN FROM A SUPER— VIRGIN HONEY.

I HAVE waited to see if some one more experienced than I am would answer the inquiry of "APICOLA" in the number of October 10th, but as no one has done so, I wish to say I tried, this summer, gratings three-eighths of an inch, and I found they did not answer; for the super, containing 25 lbs. of honey, was completely spoiled by the queen having bred in it.

I think "T. M." was too late in the day in driving his bees, as I find it takes some time to sweep the remaining bees from the driven hive, and keep them from re-entering before they will fly back to the old stance on which you have placed the driven hive. When about to unite the hives, a better plan, I think, than shaking the bees on a cloth is to invert, very quietly, the hive containing the driven bees (a bucket is an excellent stand for this hive); place the hive you wish the bees to enter on the top of it, leaving the entrance of each open. In the morning you will find all will be right.

In a back number I remember reading an account of the death of many bees after being fed on barleysugar made according to receipt in "Bee-keeping for the Many." I made some from the same receipt, with the same result. I placed a piece, 5 inches square, in the empty super, and next day I found a pint of dead bees. Can you give any reason for this?

Can I procure virgin honey from a hive put on the top of a stock with a hole in the crown of the stock for the bees to pass from one hive to the other?—AMATEUR.

[We imagine that you have by a slip of the pen written "eighths" instead of "sixteenths," and that what you have really tried and found to fail is limiting the communication between stock hives and supers to gratings with longitudinal orifices three-sixteenths of an inch wide. We cannot account for bees dying immediately after being fed on barleysugar, which, however, we ourselves never use as bee food. What is usually called "virgin honey" may often be obtained by putting a hive on the top of the stock with a central aperture; but there is less risk of the queen breeding in the super if side communication be adopted.]

JUDGING SUPERS OF HONEY.

ONE of your correspondents asks for the points of merit in a super. Although I am not aware that there are any fixed rules, the following may be relied on as good points—viz., the combs straight, all one thickness, and well proportioned, every cell sealed, the underside finely rounded, all worked comb, and free from brood, the honey of a fine light golden colour, and the comb pure and white. Such a super as this may be termed first-class, any possessing drone comb, or brood in the comb, unsealed cells, crooked or dark combs, can only be termed second or third class.

Such then being the properties or defects, how to obtain the one, and avoid the other, are matters of much importance. Hints on the management of supers might be extended to a long chapter, but I will only mention one point, which is, however, an important one, in getting bees to take to, and finish their supers. It is a well-known fact that bees do not travel or sit much on sealed honey, therefore to induce them to ascend into a super when the stock hive has sealed honey directly under the wax into it, is as much against their nature as it would be for a gardener to travel over beds of the finest flowers in order to reach some portion of unfinished ground, and this is often the cause of bees refusing to work in supers. Whenever a hive has sealed honey next to the communication between the stock and the super, it ought to be removed, and empty or brood combs put in its place. This is also frequently advisable to afford freer communication.—A LANARSHIRE BEE-KEEPER.

ANTS IN A BEE-HOUSE.

My bee-house is one of Neighbours'. In it was a weak hive which ants found out and attacked. I tried everything: guano, lime, oil. Nothing stopped them until I had some little zinc

troughs screwed on the four legs of the house, and made water-tight with putty, and then kept filled with water.—C. A. J.

OUR LETTER BOX.

STRAWBERRY COTTAGE, STOCKPORT (A. Victim).—It is a simple debt. Your only remedy is in the County Court. We advise you to inquire at Stockport about the party, and if the inquiry is satisfactory proceed at once.

FOWLS FOR LAYING EARLY AND LATE IN THE SEASON (Inquirer).—The history of laying hens in the winter is to have them the proper age. It depends far more on that than on the breed. When a pullet comes to the age of maturity she lays irrespective of the time of year. She lays because she has attained the age when she should lay. After she has passed through this she becomes a hen, and lays only at the regular season. Having said thus much we are quite prepared to admit there are some breeds which are better layers than others, and, therefore, lay earlier and later than those that are less productive. Granting that all have food and treatment alike, we should give preference to the French breeds as egg-producers—La Flèche, Creve Cœur, and Houdans. Their eggs are numerous and large, and we found these fowls last winter the best winter layers.

FEEDING POULTRY (E. S.).—It is impossible to say what weight of food should be given to fowls, as they are differently circumstanced with regard to the food they obtain accidentally or naturally. You must form your own conclusions, and will by moderate observation soon find what is the consumption in bulk of a given number kept in first rate condition. Finding its weight, you will then feed daily by giving the same weight, and you will find the smaller the bulk of the food as contrasted with weight, the greater will be the progress of the fowls. The increase of bulk is from the offal or inferior parts of the grain.

ROUSE DUCKS' WINGS STANDING OUT (T. T.).—There is no remedy. It is peculiar to some breeds of Ducks and fowls. No fault can be found with the judge who gave them the prize. It may be the parents were exempt from the fault of their offspring. It must also be borne in mind, a judge has to award to the best in a class, and if he waited for perfection, very many prizes would be withheld.

LAME COCKEREL (A. Z.).—If there is an open wound where you extracted the thorn, cover it with a piece of diachylon plaster, and sow a piece of rag over it, so as to keep the plaster in its place. If dirt is excluded from the wound it will soon heal.

CANARY MOULTING (C. A. J.).—The cause of your bird's continually moulting arises from the blood being in a bad state; the bird is sickly. Keeping it in a room too warm, or hung up too near the ceiling where gas is burnt, also catching cold, will cause the bird to remoulte. Put a little saffron in the water, give it grits (or groats), and fresh sand often, and throw some maw seed amongst it. Change its place and cover the cage over at night when the fire or gas is out, as the sudden change of the heat of the room to the night atmosphere, will often cause birds to lose their feathers.

BLINDNESS OF A CANARY (McN.).—There was probably some disease of the brain. We would omit hemp seed entirely in feeding your birds.

WEIGHT OF PRIZE RABBITS AT WOLVERHAMPTON (Tenet).—Mr. Guest, one of the Judges, has obliged us by stating that the weight of the Rabbit that won the first prize for weight at the Wolverhampton Show was 14 lbs. 11 ozs., that of the second-prize Rabbit 12 lbs. 12 ozs., and there was another that weighed 12 lbs. 10 ozs.

FEEDING BEES (P. Barington).—It is worse than useless to feed stocks that are already amply provisioned. You should therefore endeavour to obtain some idea (which can readily be done by weighing them), of the state of the stores in each hive, and give what is wanting to such as require it. All this is best done by the end of October; but if it has been neglected no further time should now be lost in attending to it.

BEES NOT TAKING FOOD (A. F., Booth Street).—Although strong stocks undoubtedly appropriate food much more rapidly than very weak ones, we are inclined to fancy that mere paucity of numbers is not the only reason why the feeding-bottle is so much neglected by your weak colony. Is not the covering material of too close a texture? and does it not after a little time assume a concave form, thereby placing the food nearly if not entirely beyond the reach of the bees? We have often witnessed this result where either muslin or fine net has been employed, and consider that no material should be used the meshes of which are less than a sixteenth of an inch in diameter. By attending to this precaution you may yet, if the weather be mild, administer a sufficient supply of food; but we believe that the bees would infallibly die if confined in a hothouse. You do not appear to be too near the city for successful bee-keeping.

THE BOOK WORM (A Country Gentleman).—The following extract is all we can offer to you.—"The great enemies of books, next to careless readers, are damp and the book grub, or the larva of the little beetle, *Aglossa pinguinalis*. To avoid damp, books should not touch the wall, so that air may circulate freely behind them, and a fire should be in the room where they are during damp weather. If books are kept damp for any length of time the pages become spotted with mildew, to remove which bleaching liquid, formed of half ounce of chloride of lime to a pint and half of water, may be applied very gently with a sponge, and then the page be washed over equally and gently with a sponge dipped in clean water. The sponge need only be just damp with the bleaching liquid. To remove ink stains and ironmoulds adopt the same process, only substituting a strong solution of citric acid for the bleaching liquid. The book grub, we believe, is bred in the paste employed by bookbinders, and to prevent the parent beetle depositing her eggs in the paste, alum, arsenic, and other chemical preparations have been added to it. The best preventive is having books bound in what is termed Indianrubber binding; but we believe if books are kept dry, frequently moved, and well rubbed with a flannel, kept for the purpose, in which some of the bark of the white birch is rolled up when the flannel is stored away, it will preserve them from this insect."

KITCHEN RANGE.—"Home-made Bread" would be obliged if any of your subscribers would state the name and address of the maker of open kitchen ranges, which have a fireclay oven for baking bread.

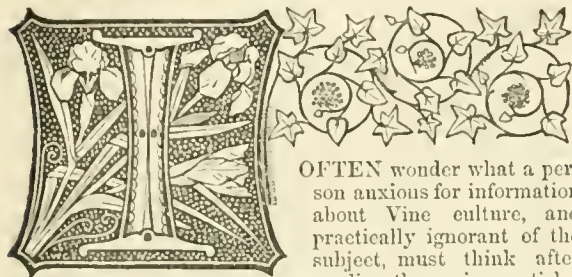
MODELLING IN WAX.—"H." wishes to be informed of a book giving directions how to model fruit and flowers in wax.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	NOVEMBER 14—20, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
14	TH	Stoke Newington Chrysanthemum Show.	48.3	33.8	41.0	19	18	47	11	44	49	46	34	49	18	15	28
15	F		48.7	34.0	41.6	18	20	7	10	4	51	7	35	10	19	15	19
16	S	Royal Horticultural Society, Promenade.	48.8	33.1	41.0	14	21	7	8	4	59	8	29	11	20	15	8
17	SUN	22 SUNDAY AFTER TRINITY.	48.1	34.2	41.1	19	23	7	7	4	11	10	after.		21	14	57
18	M		48.0	33.1	40.5	19	25	7	6	4	21	11	51	0	22	14	44
19	TU	Day breaks 5h. 27m. A.M.	48.8	34.4	41.6	17	27	7	5	4	morn.		23	1	23	14	31
20	W	Sun's declination 19° 40' s.	49.2	34.9	42.0	14	28	7	8	4	37	0	51	1	21	14	17

From observations taken near London during the last forty years, the average day temperature of the week is 48.6°; and its night temperature 34.0°. The greatest heat was 61°, on the 20th, 1863; and the lowest cold 18°, on the 15th, 1848. The greatest fall of rain was 1.24 inch.

MANAGEMENT OF VINES.



OFTEN wonder what a person anxious for information about Vine culture, and practically ignorant of the subject, must think after reading the various articles

which from time to time appear in "our Journal." It must appear to him about the most difficult problem of modern times. I once took a friend of mine into the Nottingham Manufacturing Company's machine-rooms. After seeing the wonderful "roundabout" stocking-frames at work, making stockings almost as fast as a man can walk, I could see the effect upon his mind was simply that of astonishment. One of the principals took great pains to explain the action of the machines, when the look of astonishment gave place to one of hopeless bewilderment. I afterwards heard him trying to describe what he had seen to some of his friends, but he soon finished with, "The fact is, I felt when I came out to know less than when I went in." Is not this something like the experience of some of your readers?

We have had border-making described as if it were a process similar to making a bread-and-butter pudding—first, a layer of bread, then a film of butter, then a good layer of currants, then bread again, and so on. If a reader knows anything of agriculture and a little of geology, can you not imagine him saying, "Why, surely this is not Nature's mode of preparing fertile fields; her layers are mixtures, and hundreds of feet thick; the richest soil I know has been formed by the intimate admixture of two or more formations?" Then, again, the expense; if such a border be necessary, who can afford it?

Mr. Thomson, of Dalkeith, really does grow Grapes—nay, he is said to have first-rate ones all the year round; good ripe ones on the 1st of January in each year; but there is one writer who appears to have inherited the seven-league boots, for he knows every region intimately in which a Vine is growing, cultivated or uncultivated, and he says Mr. Thomson is altogether wrong. Nay, he has asked the Vines, and they say they do not store up a drop of sap, but, like the birds, trust to the future both for themselves and their offspring—that as to rest, the idea of their requiring it is absurd, and that Mr. Thomson's houses are a kind of infernal regions where they get far too much heat and too little water, to say nothing of a horrid smell of sulphur.

But the most startling thing we have been told lately is that we cannot hope to grow Vines properly till they have unlimited room—at least a good-sized house for each plant. I fancy I hear a gardener saying to his master, who has just built a good-sized vineery. "If you will allow me, sir, I should

like to fill this house with one Vine." "Do you suppose I have built this house for the benefit of my grandchildren?" would probably be the reply; or, "Do you think I want to eat but one variety of Grape?" The gardener may say, "Oh, I can work as many kinds upon it as you like;" and the master may answer, "I have seen two Roses worked on a Briar, and two Pears on one stock, and the trees generally 'look like a pig with one ear,' the stronger kind always appropriates more than its fair share of sap. I expect this house to yield me a little fruit in two years, and a good crop in three. Don't tell me of your extension-system."

But why talk of the differences of opinion as to the best modes of cultivation when it is not yet settled what we want to produce? One writer appears to have a suspicion that the bloom on a black Grape is something uncanny; at any rate there is no flavour in it, and many would prefer sweet red Black Hamburgs to glorious-looking Grapes which are a fortnight short of perfection.

Well, if to the mere beginner this is rather bewildering, we must admit that to the more instructed it is advantageous. We cannot help thinking over some of the papers referred to, and if we are obliged to think, that is something gained. I cannot, as I have a scribbling fit upon me, resist the temptation of adding my pinch of salt to "this pretty kettle of fish" I have been describing, hoping no one will quote the proverb, "Too many cooks," &c.

I believe where Vines are in a bad state that nine times out of ten the pruning has been in fault. If a Vine is in good soil every one will admit that it ought to flourish a long time—some say one hundred years or more. Now, what is the history of most Vines?

As far as my observation extends it is generally something like this. The third year the gardener and his master are very fussy, and delighted to show their fine crop of Grapes; nothing can be more satisfactory than the crop which depends from the rafters for half, or perhaps two-thirds, of their length. By the fourth or fifth year there is a full crop still very good, but not, perhaps, quite equal to what the Grapes were either in bunch or berry. When the Vines have been planted six or seven years there are a good many shanked Grapes, and, perhaps, a good deal of red spider. The gardener is not comfortable and the master dissatisfied, and shortly a new man is in charge.

It is found now that some great mistake was made in the formation of the border. A new one is made at great expense, fresh Vines are planted, and when they come into bearing all goes on well for a time—but only for a time. If this be true, and I know it is in many cases which have come under my own observation, it requires explanation. Now, is it something like this?

Whilst the Vines are young they are annually cut back part of the way, and there is a young vigorous top which carries no fruit, but makes strong and healthy foliage the next season; but a time comes in which the whole rod is expected to bear fruit. Now, what takes place? Each side shoot is stopped one leaf above the fruit, and, perhaps, it is not allowed to make any more leaves during the season, or, what is worse, the Vine is allowed to make a considerable

growth, and when the gardener has time this is all removed. I have known barrowloads of green foliage taken out of a house in one day. Can we wonder the Vine roots are soon unhealthy, whatever the border may be in which they are planted? Does not a Chinese Tea-grower let his trees flourish till they are of a certain size? Is he not aware that they will gradually become unhealthy when cropped, and that he must provide a new plantation to succeed? I think our Vines are in much the same case.

Formerly, when the long-rod system was more in vogue, a young shoot, or perhaps two, was grown every year; these carried healthy foliage and no fruit, and kept the Vine in health. The evils of over-stopping the fruit-bearing cane were then not so apparent. Shall we go back to this plan? I say, No, the single rod is by far the prettiest way of cultivating the Vine, but we can let it carry much more foliage, and we can avoid denuding a growing Vine of its leaves. Stopping a growing shoot by pinching out the point is necessary, and, done in moderation, beneficial; there is no other way of regulating the growth of a Vine. It would not do to let one shoot take all the sap whilst another was starved; but to prune a Vine in summer is barbarous. Is this all theory? I answer, No, because I have seen Vines on which the Grapes used to shank and red spider flourish, restored to health, and bear fine crops when the treatment was changed. I can show Vines which were condemned some three years since now perfectly restored to health and vigour, and will undertake to produce all the evils above mentioned, even where the Vines are planted in the best soil and situation.

Without wishing to discourage proper attention to Vine borders, I think good summer management still more important.—J. R. PEARSON, *Chilwell*.

WINTERING BEDDING PELARGONIUMS.

IN no class of plants have greater advances been made than in bedding Pelargoniums, and certainly no other bedding plant is so well calculated to gratify the lovers of the flower garden. Indeed, so fully is the importance of the bedding Pelargonium recognised that special exhibitions of it are now held. This it merits, for if the Rose is rightly called the queen of flowers, the Pelargonium may be styled queen of the borders.

Moreover, if all the varieties do not prove to be good hedders yet many of them are useful, nay, indispensable for other purposes. If we require a deep pink for a vase or bouquet, what so good as a truss of Helen Lindsay? or if a more delicate shade is wanted, what can surpass the lovely Eve or Mrs. William Paul, or the brighter Rose Rendatler? and so I might go on and enumerate a multitude of varieties, ranging from the most delicate pink to the deepest crimson; and so numerous are the varieties, and so fast are they increasing, that no sooner do we acquire a sufficient stock of a new and apparently indispensable sort than a better is introduced, and we have to commence our labours again.

It is not my purpose, however, to enter upon a discussion of the various sorts, but to offer a few remarks on wintering them. So important has the consideration of this become, that such remarks as those of Mr. D. Thomson (page 280), are read with the greatest interest, and I am sure all those who have wintered Pelargoniums in at all a similar manner will appreciate the soundness and excellence of his advice.

My practice in wintering Pelargoniums in cold pits has hitherto been confined to old plants taken from the beds and planted in the pits in common garden soil. Dwarf unpruned plants are selected for this purpose, these are generally to be found in the outer rows of the beds; if enough of such plants cannot be had, others pruned at the time of taking cuttings are sought after, so as to avoid the necessity of shortening them when they are planted in the pits, causing fresh wounds, which frequently lead to decay. Any long or bruised roots are cut off, and they are planted far enough apart to allow the air to circulate freely amongst them; this is done about the first week in October. Water is given at the time of planting and occasionally during the month, the pit-lights are drawn off every day and are only replaced at night or during rain, and the greater part of the foliage decays and is carefully removed.

By the 1st of November the plants are in a fit state to go safely through the winter. Water is withheld from this time till the following spring, as damp is even more to be dreaded than frost. The pit walls are protected by a foot in thickness

of moss packed closely and kept in its place by stakes driven into the ground a yard apart; between these stakes a cross is formed by taking two laths and passing one end of each between the moss and the base of each stake, and bringing the other ends to the tops of the opposite stakes. This is continued all round the pits, which thus present a very neat appearance. The lights are protected by mats and dry litter. Air is given on every favourable opportunity.

Frequently during the most severe weather, when the earth is covered with snow and King Frost apparently reigns triumphant, an hour of sunshine will occur; at such times the coverings are removed sufficiently to admit of the thermometer being examined. If the temperature of the pit is a few degrees above the freezing point, the whole of the coverings are taken off and the lights tilted. Before the transient sunbeams are withdrawn the lights are again closed and dry coverings put on, shutting in a portion of the warm dry air, and thus literally setting "a trap to catch a sunbeam." Great caution is required in this operation, for should it be found that frost has "crept in" the coverings had far better remain on.

About the third week in April the plants are taken out of the pits and pruned in closely, and each plant has its roots packed in a handful or two of rich sandy soil enclosed in moss and bound up with bast, forming a neat compact ball. The soil in the pit is beaten down firmly with the back of a spade, on this the plants are placed, the spaces between the mossy balls being filled up with soil of a similar description to that in which the roots are enclosed; enough of this is used to quite hide the moss from sight. A liberal syringing is then given, and syringing is afterwards continued night and morning. Very little air is admitted till the plants break, the amount is then increased in proportion to the growth of the young shoots, until at length the lights are taken quite off.

By the time the plants are wanted for the beds or borders they are all that can be wished. As they are taken from the pits roots are seen piercing the moss in all directions and taking hold of the soil around them. Nothing can surpass plants of this description for ribbon-borders or centres of beds. The moss is very useful in retaining moisture about the roots in the hottest weather. I may just add, that the pits are at once cleared out, fermenting materials introduced, and a crop of Melons taken during the summer.—EDWARD LUCKHURST, *Egerton House Gardens, Kent*.

MANAGEMENT OF MARÉCHAL NIEL ROSE IN SMALL POTS.

THIS most beautiful of all the Tea-scented China Roses may be had in great beauty in 48-sized pots, if managed in the following way; and what, I would ask, is more beautiful and sweet, or more acceptable in a lady's boudoir than compact little plants of the sweetest of all Tea-scented Roses, with five or six beautiful flowers on them in various stages of development?

The way to have plants so bloomed in such small pots is to place a stock plant at once in a stove or any house where there is sufficient warmth to start the plant into growth. When shoots about 3 inches long are produced, they should be taken off with a little piece of the old wood, if possible. If proper care be exercised these cuttings can be taken off with a little heel at the base, but a sharp knife must be used so that the severance from the old plant may be as clean as possible, and without injury to the cuttings. These should be placed in small thumb or 60-sized pots well drained, and the soil most suitable is a soft sandy loam, about one-third of clean river sand being mixed with two-thirds of loam and leaf soil. The soil should be pressed moderately firmly into the pots, which should be filled to within three-quarters of an inch of the rim or top, placing a quarter of an inch of clean river sand on the surface of the soil. After pressing the soil moderately and so as to be level, with a dibber a little larger than the cutting, in the centre of the pot make a hole about an inch deep, place the cutting in the hole, and be particular that its base rest flat on the bottom. Then with some very dry fine sand fill up the space between the cutting and the sides of the hole; if the sand is fine and dry it will trickle into every little crevice. Next, water the cuttings, which will render them quite firm in the pots, which should then be set on a kerb or shelf in the stove where they will be partly shaded by other plants and not too near the heating medium. It is also important for the well-being of the cuttings that the foliage should be preserved

as long as possible. This may be done by keeping them from currents of air and sprinkling them once or twice daily.

In about ten days after the cuttings are inserted the leaves will begin to stiffen, and the tops to show signs of growing; the cuttings should then be gradually inured to the light, and in about three weeks they will be rooted, when they should be placed on a shelf near the glass. When they have well filled the pots with roots, which will be in about two months, they should be potted in 48-sized pots, using strong loam with a little leaf soil and sand on it. The plants should still be kept in a healthy growing atmosphere of not less than 60°, must be well supplied with water as soon as the roots have reached the sides of the pot, and should be kept growing freely all through the winter, and up to the middle or end of April, when they may be placed in a cold pit or frame to harden them off a little preparatory to placing them in the open air.

The plants should be placed out of doors early in May, the proper place for them being in front of a sunny wall or fence. They should not be plunged in any way, but must be allowed to stand in the full sun all through the summer, watering them once or twice daily as they may require it; they should not be allowed to suffer for want of water during the summer.

Treated in the manner described the plants will become well-ripened, and about the beginning of September will commence showing their plump flower-buds at the points of most of the shoots; manure water should then be given twice or thrice a-week. It will thus be very easy for persons having a stock plant or two of *Maréchal Niel* Rose to propagate four or five dozen nice plants. I have no doubt the plants I have now in bloom will continue flowering more or less throughout the winter; and if repotted in the spring, grown on freely in heat to mature their growth, then gradually hardened off, and afterwards allowed to ripen in the full sunshine, as recommended for the small plants, they will produce fine masses of bloom in the following autumn.—J. WILLS.

GROWING ROSES ON THEIR OWN ROOTS.

In all that I have read in your columns of late on the subject of Roses, I have seen nothing bearing on the culture of Roses on their own roots, nor do I find much on the subject in works on Roses, beyond the statement that Tea Roses on their own roots are best for pot culture. Will you, therefore, inform me what are the respective advantages and disadvantages of growing Roses, more especially Hybrid Perpetuals and Teas, on this system? Do the weaker varieties throw poorer flowers than when grown on an alien stock? And, if so, why is this mode of culture recommended at all for pots? In short, are there any disadvantages in the method sufficient to counterbalance these two manifest advantages—firstly, that Roses on their own roots, if killed to the ground, will break again from below; and, secondly, that they free the cultivator from all liability to those deceptive *Manetti* suckers?—A LEARNER.

[The difficulty in answering such inquiries as those above made, arises from the fact that, unlike lawyers, gardeners have no such rule as "a rule absolute" in this branch of Rose culture. To use a bold figure, Roses have likes and dislikes. Some will do nothing on their own roots, others will do nothing on alien stocks. There can be no doubt, that if land is good (abounding in alumina), the genus *Rosa* is best on its own roots; but for inferior land, and cultivation that is not high, an alien stock would probably give the greater desired product.

In the Rose kingdom, as regards "own roots" or stocks, we cannot predicate a universal. As regards Tea Roses, my impression of them is that they are best on their own roots, and that the best way to get them on their own roots is to buy them on the *Manetti* stock, and earth them sufficiently over the point of union for that purpose. All mine (I have but a few, in front of my house) are on their own roots. They were purchased growing on the *Manetti* stock.

Allowing that there is no such rule in the Rose kingdom as "a rule absolute," still I conceive there cannot be any disadvantage in having Tea Roses or Hybrid Perpetuals on their own roots. Roses generally, I think, prefer their own roots, but unless you buy them on the *Manetti* for that purpose, the process is long, and they are often ruined in their minority from carelessness. Roses on *Manetti*, and Pears on the Quince stock, will strike out their own roots to a certainty, if you cover them over the point of union. I have just moved fifty-four Pear trees on the Quince, and wherever they were covered over the point of union they have struck roots of their own.

It cannot be denied that some tender Roses and delicate growers will do well on alien stocks, nor can it be denied that some of such Roses will do nothing on alien stocks, but will succeed altogether well on their own roots.

The poverty of flowers often arises from the cultivation being inadequate. I have none in pots, except such as are invalids, and are placed in my vinery for recovery.—W. F. RADCLIFFE.]

THE CULTIVATION OF LATE RASPBERRIES AND CURRANTS.

I HAVE often heard gardeners speak of double-bearing Raspberries, but have never seen such, excepting when some strong flowering shoots of the summer varieties have produced a little autumn fruit, and then become useless for fruit bearing in the following season. The late Raspberries I grow are quite distinct from any of the early fruiting sorts with which I am acquainted. Their names I do not know, as I have always had them as the Autumn-bearing. They generally commence to produce about the second week in August, the white variety coming in a little before the red.

My mode of management is as follows:—Early in the spring the old cane is cut down to the ground, the stakes being left standing, and often visitors ask, "What do you do with those stakes standing at equal distances from each other?" as there is not a vestige of any plant to be seen. About May the young canes begin to make rapid growth, but are not interfered with till all my summer sorts have nearly ceased bearing. The autumnal Raspberries are then thinned out to six or eight canes, according to the strength of these, and here, in my opinion, lies the secret of prolonging the season of the fruit. The shoots to be retained must be very carefully selected, not taking all the earliest, but endeavouring to secure some of the latest as well, for if all the early ones were preserved and the rest cut away the crop would be over now, whereas at the present time I have Raspberries in all stages, some of the latest in full flower. Should the weather become severe I will put on a slight covering, but experience teaches me that the less they are covered up the better, as they require plenty of air.

I may here mention that I never allow digging between the rows of Raspberries, but the ground receives a good dressing of short manure, which is slightly forked in; the roots are thus kept close to the surface. The summer varieties are all treated in the same manner in regard to manure, and the result is most satisfactory.

About late Currants I have little now to say, as I consider that situation has more to do with the keeping of them than treatment. My late Currant trees are on a north wall about 150 yards long and 12 feet high. They are planted at equal distances, the rods being trained upright at about 18 inches apart. The pruning is performed very late in the season, being often deferred till the trees are nearly in full leaf. They are then cut back, and in summer as much foliage is left on as possible. The border is 11 feet wide, and is well-mannered, not dug deeply, and the crops grown on it are generally dwarf.

At present I have plenty of Currants as sound as can be desired, and I shall have them so till Christmas. The varieties are the White Dutch and Raby Castle (red). Of the common Red Currant I have a few on the wall, but they are quite useless and black.—JAMES STEWART, *Nuneham Park*.

TRANSPLANTING APRICOT TREES.

I TRANSPLANTED three Apricot trees on the 20th of September, 1866. The varieties were *Royal*, *Moorpark*, and *Hemskerk*. Those trees every year produced abundance of blossoms, but persistently refused to bear a single fruit, so that I was determined either to kill or cure. The result, however, was a complete cure. This year I had as fine a crop as well could be wished for. This success I mainly attribute to the early moving of the trees, so that I altogether agree with Mr. Abbey's excellent practice.—W. H. C.

PELARGONIUM MISS WATSON.—I observe that at page 331 Mr. Watson appeals to my opinion in favour of this variety. He is quite justified in doing so, for I consider it one of the very best in form and colour. The best proof of my estimate of its merits is, that I bought a plant at first sight, and I am perfectly satisfied with it. If the growth is equal to its raiser's

statement, it will prove one of our greatest acquisitions, and will long hold a high place among such varieties as Lady Cullum, Lucy Grieve, Northern Star, and Victoria Regina. It is equal to either of these, and very distinct from them all, and is quite worthy to be called "the beautiful Miss Watson."—D. T. FISH.

CLOSING ORCHARD-HOUSES EARLY.

PERMIT me to ask Mr. Pearson his motive for closing his orchard-houses to give flavour to the fruit. A gardening friend of mine happening to call at the Chilwell Nurseries one fine day about the end of August last, and seeing the orchard-houses shut up closely, asked the foreman the reason. He replied that Mr. Pearson thought it caused the fruit to have a better flavour.—W. C.

[We have inquired of Mr. Pearson, and he has obliged us with the following reply:—"We always shut our orchard-houses up at four o'clock (see page 31 of my "Hints on Orchard-houses"), to forward the fruit; if too late in ripening they are injured in flavour. In very hot weather, when the fruit is nearly ripe, air all night will do good; but Peaches, when too cold, are always deficient in flavour."]

PLANTS IN BLOOM DURING OCTOBER.

Among the many beautiful plants I have seen during the last month, one deserves a passing notice. It was a shrub about 4 feet high, growing in the American border, was covered with spikes of rather dull white flowers about 5 inches long—perhaps the dull colour might be attributed to the late season—and is named *Clethra alnifolia*. It likes shade, but cannot bear confinement by other trees, and it flourishes in a moist American border. It is a native of North America, and is worthy of much more extensive cultivation. It may be increased by layers or division. I have not tried it, but I have an impression that it might be of very great service grown in pots and plunged for the autumn decoration of the greenhouse or conservatory. Its beauty and fragrance so late in the year as October render it especially valuable.

Oct. 3, <i>Lythrum tomentosum</i>	Oct. 18, <i>Convolvulus althæoides</i>
<i>Anemone japonica</i>	<i>Phlox stolonifera</i>
<i>Salvia patens</i>	<i>Berberis Darwinii</i>
<i>Tigridia conchiflora</i>	<i>Clematis Hendersoni</i>
<i>Gladiolus gandavensis</i>	<i>Alonsoa incisifolia</i>
<i>Loasa aurantiaca</i>	<i>Bartonia aurea</i>
<i>Origanum marjorana</i>	<i>Callirhoe digitata</i>
" 7, <i>Hibiscus africanus</i>	<i>Clarkia grandiflora</i>
<i>Erica ramentacea</i>	<i>Gilia tricolor</i>
<i>Anne Boleyn Pink</i>	" 22, <i>Collinsia grandiflora</i>
<i>Veronica incana</i>	<i>Gynierum argenteum</i>
<i>Clethra alnifolia</i>	<i>Ipomæa quamoclit</i>
" 12, <i>Coronilla elegans</i>	<i>Lasthenia californica</i>
<i>Erigeron bellidifolius</i>	<i>Leptosiphon androsaceus</i>
<i>Eupatorium purpureum</i>	<i>Malope trifida</i>
<i>Helianthus diffusus</i>	<i>Mesembryanthemum tri-</i>
<i>Parnassia palustris</i>	color
<i>Gaillardia picta</i>	glaucum
<i>Wellsiana</i>	<i>Nicotiana tabacum</i>
<i>Zauschneria californica</i>	virginica
<i>Plumbago Larpentæ</i>	<i>Oxyura chrysanthemoides</i>
<i>Cercis sativeus</i>	" 27, <i>Portulaca grandiflora</i>
<i>nudiflorus</i>	<i>Verbena venosa</i>
<i>Sedum telephium</i>	<i>Zinnia elegans</i>
" 15, <i>Watsonia angustifolia</i>	<i>Gedelia rubicunda</i>
<i>Loasa lateritia</i>	<i>Lathyrus magellanicus</i>
<i>Bidena cernua</i>	<i>Eriza maxima</i>
<i>tripartita</i>	<i>Corydalis glauca</i>
<i>Rudbeckia fulgida</i>	" 30, <i>Celchicum autumnale</i>
<i>Jasminum pubigerum</i>	plenum
<i>Rhododendron hirsutum</i>	<i>Rubus idæus</i>
" 18, <i>Tormentilla reptans</i>	<i>Viscum album</i>
<i>Apargia autumnalis</i>	<i>Adonia autumnalis</i>
<i>Omphalodes verna</i>	<i>Pectis grandiflora</i>
<i>Spiranthes autumnalis</i>	<i>Mirabilis dichotoma</i>
<i>Sedum Sieboldii</i>	

—M. H., *Acklam Hall, Middlesborough-on-Tees.*

LATE CAULIFLOWERS.

HAVING just now some heads of Lenormand's Cauliflower as fine and compact as any I have had during the summer months, I beg to make known to the readers of your Journal that I sowed the seed of the above-named Cauliflower on the 12th of May, pricked out the plants into nursery-beds when fit to handle, and attended to watering as required, finally planting out for heading on the 20th of July.

I sowed some seed of Grange's Autumn White Broccoli on the 11th of April, and attended to pricking out, &c., as above.

The two kinds are planted beside each other, and I must say that the Cauliflower is far superior to the Broccoli. The latter is not at all close, and is of an inferior stained appearance, and more inclined for starting.—P. B., *Charleville.*

AN OCTOBER AFTERNOON AT BOWOOD, WILTS.

THE SEAT OF THE MARQUIS OF LANSDOWNE.

(Concluded from page 346.)

ENTERING the drawing-room at Bowood associations crowd upon me. Here used to come in, eyeglass at eye, little Tommy Moore, tumbling over footstools and hassocks, and here he used to trill out his sweet Irish melodies. Here Miss Berry, the late love of Horace Walpole—he eighty, she little more than twenty; and the old lady who said she had been ordered by her doctor to take one tea-spoonful of brandy in her first cup of tea. Solemnly she drew forth her flask, then she held the spoon with the bottom upwards, and poured away with a peculiar purblind look; then presently she started as if discovering her mistake, and turned the spoon the right way, and measured an exact spoonful. This she did every time, so the old lady had a cup of tea and—something else, and a pretty strong something too.

But I am forgetting the pictures, the most choice collection, it is said, in Wiltshire. At the centre of one end of the drawing-room hangs a most beautiful Murillo, a life-size portrait of a Spanish gentleman sitting, and with a dog at his feet. The power as well as the sweetness of that pale face is wonderful; it seems as if just turned to you, and that in an instant it will speak, and speak most earnestly. This picture is to my mind far beyond any other at Bowood. To the right of the Murillo is Sir Joshua Reynolds's St. Cecilia, being, in fact, the portrait of Mrs. Sheridan, playing a harpsichord. She was the famous musical beauty Miss Linley, for whose sake Sheridan fought the two duels with Captain Matthews. Alas! owing to Sir Joshua's constantly experimenting in pigments, the colour of the dress is fast going. On the other side of the Murillo is the portrait of dirty, witty, woman-hating Lady Mary Wortley Montague, who said "she was glad she was not a man, as she should have had to marry some woman." Sir Joshua has represented her in a Persian dress, this also fading.

It would be impossible in a short article to describe all the pictures, but I will glance at a few. On one side of the room is the pretty saucy face of Peg Woffington the actress, by Hogarth. Poor Peg's career was cut short by an attack of paralysis while in the very act of addressing an audience. With sad flaws of character, she is said to have been very kind to the poor. On the same side of the room is the infant Johnson, concerning which this tale is told:—Reynolds, laughing, said one day to the great doctor, "Oh, doctor, what an ugly baby you must have been! I'll reduce your face, and paint you as an infant." And a queer-looking infant he painted—a sort of infant Hercules, pouting, and in a bad temper. At the other end of the room is the famous "Windmill" by Rembrandt, said to have been, but this is not quite correct, the only landscape that artist ever painted. Many have come hundreds of miles to see this picture, and it is marvellous in its shading. At the same end is an admirable Gainsborough, in which the cattle strolling forward look as if they must stroll into the room.

In the dining room, by far the loftiest and finest room in the house, the larger panels were painted by Stanfield, and he himself considered them his very best pictures. The two Venetian views at either end are excellent, and are said to light up well. I could not but think of the company that had dined here—Lords Grey, Russell, the jaunty Palmerston, and other great whig statesmen. Here the present French Emperor, after his escape from Ham, used to be slightly poked at by Lord Lansdowne by the question, "Prince, won't you take a little more ham?" Here Sidney Smith was wont to set the table in a roar. Here Macaulay used to show his wonderful memory, and his forty-thousand power of talk.

Passing to other rooms, I will just note that here is the original of the often-engraved "Return from Deer-stalking" by Landseer—a narrow road painting difficult to get a good view of. Then there is "The Pool of the Thames," by Callcott, with its hundreds of masts, and a Thames boatman in a punt, who seems just going to shout; but I would rather he would not, for I am sure by the look of him he would swear. Also a view of St. Michael's Mount, with a thin light haze upon

it—a very fascinating picture. There is, too, the portrait of Hogarth by himself, in which the coarse humourist is shown to have a coarse face. Etty's, Wilkie's, another Rembrandt, a Wouverman, with a white horse in it of course, a Canaletti, and many others. In the gallery leading to the library is the Claude, a little picture, untouched since Claude's brush touched it.

Entering the library, that library of well-chosen books, well read by the great Lord Lansdowne, who, we must remember, found Bowood an empty shell, and left it stored as I found it with art treasures of every kind. In the library I could fancy I could see the one who so loved to be there, and was there so many years—in the blue tail coat and buff waistcoat, and light trousers, the neatest of old English gentlemen. I forgot in its proper place to note a cabinet full of Sèvres china, one piece presented by Napoleon III. The perfect manner in which Bowood is kept up adds to the charms both of the place and its priceless treasures. Above all, unlike so many great places, it looks a place to live in and be happy.

But no more of the interior; the bright autumn afternoon is hasting on too fast, and we must hasten on as well. Leaving the house, we enter the kitchen garden at the back. The first thing that strikes me is the beautiful training of the trees. When inspecting various vineries, I notice that in the Muscat houses the Bowood Muscat is at once seen from the greater size of its bunches and berries. In the fruit-storing houses we tasted one of Rivers's Victoria Nectarines, and pronounced it most excellent. The long, very long and new orchard-house especially attracted the attention of my companion and friend, and put him in a pleasing state of delight and admiration. The Salway Peaches still hung on the trees.

Going straight through the kitchen gardens, those well-stored well-kept gardens, we come upon a most interesting part of the grounds. On one side of a very long and winding path are planted (not like an avenue, but on a broad space on either side), the Conifers of the Old World, and on the other the Conifers of the New. On either side they are arranged geographically from north to south. This delightfully planted ground was the work of Mr. Spencer, who happily has lived to see his children grow up to a goodly height. Here and there frost has thinned out or injured, but as a whole the collection is admirable, and I should say unique—it was a grand thought successfully carried out. Never before did I see the Conifers on so large a scale, and owing to the arrangement I could make a good comparison between the relative beauties of the trees. There was one of the Old World so tough that the climber—hunter, perhaps—can trust his weight upon a twig, as it is sure not to break. Then there is one of the New World, apparently without any bark; its trunk stands as if arrayed in cocoa-nut fibre, out of which, as out of holes, grow the well-clad branches—a ragged mother of well-clad children. These Conifers are many of them of great size, the soil, and climate, and situation of Bowood appearing to suit this family of trees.

Going forward and bending to the right we reach again the lawn, and catch here and there a glimpse of the lake. Many fine trees are on the lawn; specially I noted an old Pinus pinaster, rough-barked, and rising in three tall stems, those stems a colour which Mr. Ruskin would delight in.

A few yards further on, and we leave Bowood by the same gate as that at which we entered. I feel since I passed that gate scarcely three hours ago, as if a much longer time had elapsed; for my eyes have been filled, and my mind filled—filled with what my memory will never let die, for it is the blessing of such days that they never pass away; we live them over again, we enjoy them years afterwards almost as much as at the time.

Just as I was thinking I had seen all, my good host said, "Now you shall have a drive; my dogcart is ready and the light is fast going, so there is no time to lose." The park and pleasure grounds at Bowood are nearly encircled by a broad belt of plantations. Through these we drove, along half-natural half-made roads. Sometimes we came upon a bit of planting where there was no underwood, but the Beeches stood out clear to the roots, showing forth their well-shaped stems; then more usually the underwood was massive and green; then, again, Ferns now yellow with autumn were around us. Then across a wide, open, arable tract we saw a semicircle of planting; and oh, the lovely autumnal tints! But deeper and darker grew the wood, and an awe crept over me; and soon we were in the front of the family mausoleum, a Grecian building, heavy and solemn-looking—no, not solemn, gloomy-looking. It seemed to tell of death and separation without the resur-

rection and the reunion. It seemed to speak of heathenism, not of Christianity. I contrasted with this the bright sunny slope of my own beautiful churchyard, which overlooks indeed a wooded landscape, but not one shadow falls upon it—not a single twig breaks the cheering sunbeams. How I prefer the latter as a place of burial.

Driving on farther (it was getting dim now), we reach Lady Lansdowne's poultry establishment, and a capital one it is. It consists of a long row of buildings facing the south. They resemble a row of cottages, and have a wired enclosure their whole length, this being divided into runs. Then beyond the whole is a good-sized piece of park enclosed by very high palings; in its centre a slate-covered dry run, with plenty of loose earth in it. At cottage No. 1, so to speak, I found a famous old Norfolk poultry woman, full of love and tender care for her charges, over whose illness and death she is said to shed a tear. Then at cottages Nos. 2, 3, 4, we found the poultry perching for the night. I suggested broader and straighter perches. No. 5 was the meal house, and I examined the Sussex meal in the bins. These several buildings are low, and I think one-roomed. Then across a run is a little squat building by itself, for the chickens after they leave their mothers. Deep in clean straw was this house, and many the chickens cosily sleeping together.

The fowls I saw at Bowood are Silver-Grey Dorkings, by far the prettiest to my mind of all Dorkings, although beaten in size by the darker breeds. There are also Game kept at Bowood, and some Silver-spangled Hamburgs. A pleasant chat with the old lady, and then a quick drive back to Mr. Spencer's. "Something more I must show you," said he, and in a corner of his own buildings I found four Game Bantams at roost, the pets of their master.

Then in-doors, dazzled by the bright light, and our noses regaled by the tea awaiting us. Oh! the old washerwomen are right. If there is nectar on earth it is a cup of tea; and for Ganymede, commend me to a kind English matron to hand it to me. You may notice people always talk best at tea; at dinner they are often sulky, but never at tea. But no more of tea—yes, one cup more and away, for I have a long drive, and the morning's rain is renewed. Therefore as

"Nae man can tether time or tide
The hour approaches, we maun ride."

Just in the act of going I peep into Mr. Spencer's study, from which in former years so much instruction to the gardening world was wont to be issued. I close a happy day by a meditative ride, arranging in their order the events of the last six hours; now and then saying to my companion, in spite of the rain pattering on our half-open carriage, "What a charming day we have had!" and his reply, "How our host laid himself out to make us happy, and how he succeeded!"—
WILTSHIRE RECTOR.

BEDDING PELARGONIUMS.

I MAY be permitted to make a few remarks relative to the best kinds of bedding Pelargoniums as I have found them answer in our rich clay loam in "The Mash," as the natives call it, which produces the famous Cheddar cheese. I will take "A. O. W.'s" communication at page 326 as my text.

First of all, let me observe that I endorse all he says in favour of Stella and Cybister, both of which bloom splendidly with me. I can tell no difference between them as to blooming qualities or growth, but on the whole I prefer the bright scarlet of Cybister, as well as the pale green of its foliage. Nothing could be finer than a mass of it, which I had against an old stump. Everybody was attracted by it, overlooking Stella, which I also had in a mass in a basket; and yet Stella is indispensable to every garden. Both these varieties stand bad weather, as Nosegays, admirably. Monitor with me is a failure. I find it very difficult to keep alive in winter, and its truss, although fine and showy, owing to the great length and slenderness of its stem, is borne to the ground instead of standing erect. I have entirely got rid of it this autumn.

I do not agree with "A. O. W.'s" comments in respect to Lady Cullum, which has been universally admired for its profuse blooms and very dwarf growth throughout the summer and autumn. I tried it in a small circular bed, a double row of it, surrounded by a belt of Flower of the Day, for foliage, and with a mass of Iresine in the centre. It was a lovely combination. I am propagating the variety largely for another year. Helen Lindsay and Mrs. Whitty are identical and almost

worthless. Amy Hogg promises well, but I have only just made its acquaintance.

Of other varieties not named by your correspondent, among Zonals I greatly admire St. Fiacre, a profuse-bloomer everywhere, and especially charming in the greenhouse, where it is one of the latest in bloom; Roi d'Italie, magnificent as an old plant to stand singly; Spitfire, a profuse-bloomer and dazzling crimson scarlet in poor soil; Dr. Lindley, very fine; Zélie, which I had from Jersey, a very free-bloomer, with a broad, almost black zone nearly covering the leaf, colour cerise rose; Crystal Palace Beauty, a vigorous grower, with fine trusses of purple magenta blossoms, each flower as large as a crown-piece, with thick round petals; and Souvenir de Sir Joseph Paxton, a splendid pale-eyed bright pink variety, with immense trusses, *beau idéal* in colour, and unrivalled as a pot plant in the greenhouse; I cannot speak of it yet as a bedder. Rose Rendatler, also, I greatly admire as an old plant standing singly, with its abundant trusses of pale salmon blooms and well-defined salmon pink eye. Many other varieties I have on trial, which have each their distinctive beauties, as Trentham Scarlet, Paul l'Abbé, Christabel, Magenta, Beaton's Pet, &c.; but I am not sufficiently acquainted with them yet to recommend them specially.

Of Variegated Pelargoniums I have tried several varieties, but have found none surpassing in their several shades of white and cream the old Flower of the Day, Bijou, and Alma, or among gold-edged varieties Golden Fleece, Golden Chain, and Cloth of Gold. All the latter love partial shade, and thrive in rich loose soil. Cloth of Gold is least tolerant of summer sunshine and drought. Golden Fleece is invaluable for its dwarf procumbent tendency and profuse-blooming qualities; as an edging to, or dotting a bed of blue Lobelia, it is exquisite. Of the former, Bijou has the purest white. It is apt to grow leggy if left to itself; but judicious nipping will make it grow as bushy and squat as can be desired. Alma is naturally dwarf, and is the next purest white; but Flower of the Day, with its rich cream-coloured foliage and moderate growth, makes one of the best of edgings.—B. & W.

THERE are two varieties that "A. O. W." has not named; one of them, now an old kind, Lady Middleton, and I never saw a more beautiful, soft, glowing bed than I had of it this summer and autumn. In fact, when other beds "were withered and gone" this lovely Pelargonium burst out afresh, and was like a glowing jewel until late in October. Let any one but try this variety in a not-rich soil, and he will not be disappointed.

There is another Pelargonium, a Nosegay, and it quite surprises me how little is said about it—namely, Rival Nosegay; such trusses of crimson magenta flowers I never before saw. The habit of the plant, too, is first-rate—dwarf and bushy, and continually throwing up fresh blooms. I had some eight or ten plants of it bedded out this season, and I have cut them up in pieces, so as to have a good stock for next year. I only wonder how comparatively indifferent kinds are lauded, and this splendid variety passed by. Beauty (Williams), makes a very bright and effective bed; so does Flower of Spring—I do not mean the variegated; and in a fine, warm, dry season Amelina Grisau and Eugène Mécard, amongst the painted varieties, are very beautiful sorts in a moderately rich bed.

The catalogue of useless sorts, as bedders, would I fear be too tedious to give. Amongst Variegated Pelargoniums I am old-fashioned enough to say that Bijou is a great favourite still. It has a fine silvery leaf, and its flowers are far from being mean or despicable. Golden Chain, much abused for its slow growth and delicate constitution, is, in my opinion, a beautiful and distinct bedder. As a pot plant (I have not tried it as a bedder), Emperor of the Nosegays is a splendid variety.—W. H. B.

UNSEASONABLE STRAWBERRIES.

THE Strawberry-beds in my kitchen garden present a rather remarkable appearance for the time of year, and afford strong evidence of the unusual mildness of the season. A large number of the plants are in flower, and five or six of them have developed full-sized fruit of strong healthy appearance, some of which are partly coloured: one of them would already make a very fair show upon the dessert-table. Comte de Paris is the sort that seems most forward in this unseasonable fruiting.

My beds lie in a warm situation sloping to the south-west, but do not receive the benefit of all the sun that is to be had at this time of year.

My Raspberry-canes have continued to ripen fruit up to the present time; I have still some quite-eatable berries upon them.

I shall be interested to know whether any of your correspondents can give similar reports from their gardens.—F. H. JANSO, Oakbank, Chislehurst.

NOVEMBERS AND JUNES.

In my paper on an analysis of the weather, which you did me the favour to notice in your Journal, it is stated as a result, that the eight cold Novembers which occurred between the years 1851 and 1861 were followed by Mays and Junes of a similar character. These coincidences, as far as they go, seem to be worthy of consideration; but many more years of observation must elapse before it can be determined whether the atmospheric conditions of November do exercise any positive influence upon those of succeeding seasons. There can be little doubt, however, that cold in early autumn, followed by unfavourable weather about the time of the summer solstice, interferes sadly with the quality and quantity of vegetable products. Such is the case, at all events, in Guernsey, where October is generally a wet warm month, and where, beyond slight and transient hoar-frost, seldom does any material lowering of temperature take place until the end of November. In the course of twenty-four years' observation the minimum thermometer in October did not fall below 37°, and on two Novembers only, during the same period, did the temperature fall below freezing-point.

Under normal circumstances, therefore, vegetation continues active until late in the year, and the sap-vessels of plants remain filled with aqueous juices, in which state it is a received axiom, they are most of all susceptible of injury from depression of temperature. A slight degree of frost, therefore, in November will act upon them more prejudicially than a much greater degree at a more advanced period. When frost, however, does chance to occur too early, vegetation becomes so much checked that the due consolidation of young shoots is prevented; and, even though their sap-vessels may not become ruptured by congelation of their watery contents, the deposit of those special secretions designed for future assimilation is impeded, if not entirely frustrated. Now, as this process of assimilation is in progress about June, unfavourable weather at this time, even mere absence of sunshine, tends to interfere in no slight degree with the due maturation of crops, prevents fruit from acquiring proper richness of flavour, and predisposes it to decay.

Combinations as untoward as the foregoing being, happily, exceptional in this climate, it may be well to pass in review the occurrences of an ordinary year, and the present affords us a fair example, especially as a tolerably favourable June succeeded a mild November.

On referring to my analytical tables it will be found that the month of November, 1866, was moderate as to temperature and rainy days. Subsequent observations show that January, 1867, was cold; February very warm and rainy; March cold and equally wet; April boisterous and bleak, with heavy showers of hail on the 20th and 21st. This leads me to remark that extensive fields of ice had previously been met with by navigators off the coast of Newfoundland, nearly in the course of our isothermal line. For many years past I have been induced to ascribe breezes unusually keen during the spring and summer to the presence of icebergs in our latitude, however far removed from us in point of longitude. This opinion was strenuously opposed by a late meteorologist, but the coincidence, nevertheless has been of frequent recurrence; remarked by others as well as myself, as is proved by the following passage from the *Illustrated London News* of the 13th of April, 1867:—"It has been asserted that the severe weather recently experienced in Great Britain and France was due to atmospheric disturbances in the North Atlantic Ocean; and all arrivals at Liverpool from New York, and other ports of the United States and Canada, report unprecedented quantities of ice in mid-ocean, about 44° N. lat. and 53° W. long. One vessel had to sail two hundred miles in a southerly direction alongside a perfect continent of ice."

But to resume. About the middle of May, strong gales with occasional storms of thunder, lightning, and hail, occurred, and the air was generally chilly and bleak; but, owing to some intervals of warm sunshine, the temperature was somewhat above the mean of years. In June, gentle, but, nevertheless, keen breezes predominated from N.E. and N.W., but, as the rainfall

was much below the average, the sky comparatively cloudless, and the sun very powerful, crops in general wore a favourable aspect. This fair prospect was seriously interfered with by the prevalence of cold, boisterous, rainy days in July, but the impending evil was partially averted by a dry August of moderate temperature, and a tolerably fine September. The number of rainy days during the last-named month was not above the mean, although such unusually heavy showers fell that the amount of rain collected exceeded the monthly average. One shower lasting about two hours on the 9th, yielded upwards of 1 inch and six-tenths of rain.

It must be remarked that the cold of January and spring did not prove generally injurious to vegetation; the warm sunshine of June favoured the assimilative process, but fruit trees, Potatoes, and other herbaceous plants, were much blighted by the wind and driving rain of July. Stone fruit, however, escaped much injury; although not abundant, it coloured well, and acquired good flavour. Figs, of which there was a fair show up to a certain period, dropped off long before they were ripe, and the few that remained on the trees were indifferent in flavour. Our staple Pear, the Chaumontel, though well shaped, and of good colour, did not attain the usual size, whilst that against walls with a westerly exposure was completely blighted by pelting hail storms, just as the fruit was setting; the trees also suffered severely. The Apple crop was healthy, and in fair quantity up to July; but it then became infested by insects, much of it fell off prematurely, and the rest showed such a disposition to ripen that it was necessary to gather it earlier than usual, especially the King of the Pippins, and the Hawthornden, the latter of which spotted suddenly, and as suddenly decayed, even on the tree. The Blenheim Orange was undersized and uncoloured; but the Sturmer Pippin, that invaluable Apple, remained sturdily on the tree in spite of gales and heavy squalls beginning on the 28th of October.

From the above résumé it will be seen that July was the most fatal month in its effects upon vegetable products. In relation to this subject, the Rev. T. C. Bréhaut, on the 15th of the month, wrote to me as follows:—"These few days have ruined all our ornamental-foliated bedding plants. Cannas are half of them destroyed, and Japanese Maize quite spoiled. For my own part, I feel convinced that the excessive wind has much to do in the failures we meet with." As a proof that our opinion on this point coincides, I venture to cite a passage from a paper of mine read before the Meteorological Society, as long ago as the year 1852. "The causes which principally modify the climate of Guernsey, are to be sought for in the characters of the wind, not so much as regards the quarter from whence it blows, as in its force and frequent variation." To this I may add that the solstitial gales are more regular, and sometimes quite as violent as the equinoctial.—S. ELLIOTT HOSKINS, *Guernsey*.

PROPAGATING DRACENAS.

SEING in No. 314, inquiries as to the best mode of propagating *Dracenas*, I write to give the information needed.

Turn an old plant out of its pot, and shake away the soil. There will be found a strong tap root, cut that root into lengths of about 2 inches, insert them into three-inch pots in a compost of loam, leaf mould, and silver sand, and place them in a brisk moist heat of about 80°. In about three weeks they will have filled the pots with roots, repot them into six or seven-inch pots, and grow them on in the same heat; they will soon make good plants for decorative purposes. The old plant can be potted again, and will be very little the worse of the treatment it has undergone, but it will require to be plunged in bottom heat to give it a fresh start.

I should like to know if any of your readers have succeeded in bedding out *Dracenas*. I have had a plant standing out of doors all the summer; it kept its colour well, but did not grow.—W. B.

DEPTH OF PLANTING ROSES.

I HAVE read with astonishment the remarks of "P." on page 316, as to a Briar Rose prospering, that was planted eight years ago from 4 to 6 inches deep, and which has benefited by the heaping up of soil three additional feet over its roots. If the Editors' solution is not the true one, probably the following may be so:—The Briar may have made roots higher up the stem. Would "P." oblige by examining the tree? The case is not quite a parallel. I spoke of planting deeply; this is a case of

earthing-up deeply. The sun would probably act on the soil, and cause the Briar to strike new roots higher up. I should not like to plant Roses in the soil 3 feet 6 inches deep!—W. F. RADCLIFFE.

DESTROYING WASPS—THEIR HABITS.

I HAVE only just seen the observations of "W. A. W.," in your Number of October 3rd, where he comments upon my method of destroying wasps.

I think the use of the cyanide of potassium is far preferable and more efficacious than the mode he recommends with turpentine. He practises his at night; mine is best done at mid-day. There are many reasons why it is preferable to attack wasps in the daytime, and not the least advantageous is, that they are not nearly so vicious in the day, as they are at night.

My experience does not confirm his statement, that there are more entrances than one to a wasp's nest. I never saw more than one. The hornet has several entrances to its nest, but wasps, I believe, have only one.

There is, also, this fact in connection with wasps. It appears to be part of the regulation of their household or colony, that one should be "told off" daily, whose duty it is to act as sentinel, and who parades the passage from the combs to the outer orifice. I believe every wasp alighting has to give his "password" to the sentinel before he enters, and this sentinel also gives the alarm to the inmates when suspicion is aroused of evil intentions to their safety, and on provoking a wasp's nest you will always observe that the wasps who come from the inside are those which are dangerous, and not those returning home. To prove this you have only to kill the sentinel, and no amount of provocation will cause any wasps to come out from the hole. You may thus cause a very busy nest to become quiet for the remainder of the day, by destroying the sentinel.

Some persons state that none of the wasps coming home can be made to sting. This I have not verified, but that they will not come out from the hole I have often proved.

On dropping into the hole some of the solution of the cyanide, the sentinel is killed at once, for he comes at once, and would attack you, but he falls the first victim, and then the work is easy. If it is considered preferable to pour into the hole some of the solution of the cyanide, it will answer as well. The hint was to prevent its being absorbed into the soil. The quantity required is not great, and with "caution" no danger can result. I have used these means for years, and have had no accident.—AMOS BEARDSLEY, *Grange, Lancashire*.

BUTES-CHAUMONT. PARIS.

"You ought, sir," said my landlord, in his politest manner, "to visit the new park at Buttes-Chaumont;" and when Antoine informed me that he and his Victorine had spent a day there last season, and that I should find it "charmante," I was fain to comply. "And do not, sir, go in an omnibus. When we went we took a fiacre, and Monsieur will be so much more 'comfortable'!"—a word the French, by-the-by, are beginning to use now very constantly. Such was Antoine's recommendation, and, doubtless, vividly the pleasure of his outing came before him as he gave it. I took his advice, and I want now to give the same to any who may go Paris-ward, and say it is (and it will be in a few years much more so), well worth a visit.

And what is Buttes-Chaumont? A few years ago had you asked any one who had ventured so far to what we might call the east-end of Paris, the answer would have been—a receptacle for the filth and abominations of a filthy neighbourhood; a place which was offensive to the eyes and nose of any one who ventured near; it was, in fact, an abandoned stone quarry, and every one who knows what that is can readily understand what it must have been in the neighbourhood of a densely populated city. Nothing but the rankest and coarsest weeds would grow on it, and if asked what could be done with it, the answer would have been from every one—Nothing, absolutely nothing. Not so, however, thought Baron Haussmann and the municipality of Paris, and the result is what, although not yet completed, I venture to think will be some day one of the most attractive of the public gardens or parks about Paris; and as I know nothing which better shows the taste and ingenuity of the French in landscape gardening, I will venture to describe it.

Buttes-Chaumont is situated at a very high elevation, and

was remarkable in 1814 for a vigorous defence by the artillery of the marine, assisted by some pupils of the Polytechnic school, and is a very favourable point for viewing the city, although not so much so as the Arc de Triomphe, for the manufactories, which have so greatly increased of late years in Paris, in some degree by their smoke tend to obscure the view; but before you is Montmartre, at your feet lies Paris. The course of the Seine may be easily traced, while far away in the distance stands Mont Valérien, one of the most formidable of the forts which overawe Paris; on one side is the new cattle market, and on the other side the new abattoirs, two of the greatest improvements the city can boast of. The park itself comprises only about fifty-two acres, and on one of its eminences used to be erected the gibbet of Montfaucon, on which there were often sixty to seventy corpses hanging, while a cavern received them afterwards.

One could hardly have supposed that so wild looking a spot could be so close to Paris; but the manner in which the stone has been quarried has left the rocks singularly rough and natural looking, and the skill of the gardener has been used to fall in with this, and not to make a trim Bois de Boulogne out of such a spot. To have done so would have violated all the proprieties of the place, and hence the style is entirely different. In the very centre of the ground there is a large hill of considerable elevation, on the top of which a small temple, somewhat in the style of that of Venus at Tivoli, has been erected. This large piece of rock has been made into an island by a piece of artificial water, which surrounds its base, and apart from it stands a lofty piece of rock, some 50 or 60 feet high, quite detached, and the whole piece of land is joined to the mainland by a bridge. Near this has been arranged a pretty waterfall, somewhat in the style of that of the Bois de Boulogne, but higher, and with not so large a volume of water, while from the hill two small rivulets, most naturally arranged, flow down into the lake. All this seems very cockneyish; but the result worked out does not give one that notion at all; for in the first place all artificial vases, fountains, busts, &c., are banished; and in the second place everything has been done by the gardener to give it a natural effect. Alongside the waterfall Ferns, Brambles, and the wild plants which flourish in such localities have been planted, and so along the little rivulets care has been taken only to place such plants as are naturally found there. Again, on the rockwork numbers of Cotoneasters have been planted and carefully trained; the Ivy has been made to run over the rocks, and is kept in its places by ties of various kinds. A large number of Conifers has been used in the place, as being more in character with the ground than other trees would be. When you get away from the wilder parts you come on beds similar to those used in the public gardens—*Coleus Verschaffelti*, &c.; and a plant which I think ought to be more used with us, the *Lantana*, is planted in large quantities; but this was not so interesting to me as the wilder portion of the ground. Bad taste might have made a Rosherville or Cremorne of it; but the really good taste displayed has made an effective piece of landscape gardening of a very unique character, and in a few years, as I have said, it will be much more effective.

How is it, I frequently asked myself, that in going through such gardens in Paris we do not see the sort of people we meet in the London parks? Go to Battersea, and you will find always some miserable-looking, ill-conditioned people, whom you would be sorry to meet in a lonely place; but here the workman, when he turns out for the day, is a different-looking being. What becomes of the Paris roughts? are they kept in the background, or is there a propriety of behaviour innate in them, which one looks for in vain in London? Whatever be the cause, certain it is so; and it adds a little, I must say, to the enjoyment of such places, to see that the people for whom they are intended seem to appreciate them so much, and speak as old Antoine did of them, with so much pleasure; and amidst the many proofs of the wisdom of the present Emperor, the opening of such a place as this is a prominent one. By all means, then, I say to English visitors what Antoine said to me, Go and see *Battes-Chaumont*.—D., *Deal*.

BEGONIA PRESTONIENSIS FOR BEDDING.

It may not be generally known that the above Begonia is very useful as a bedder, either in masses, or in rows for ribbon borders. It possesses three good qualities—namely, it is a profuse bleemer, is of close dwarf habit, and never looks dashed

by the rain. It is easily propagated by cuttings in the spring, and should not be planted out till the second week in June.—M. H. W.

A PLEA FOR SALVIA SPLENDENS.

For those who have a large conservatory to supply with flowering plants during the autumn and winter as well as summer, *Salvia splendens* will be found invaluable. Its profusion of bright scarlet flowers, fine pyramidal form, graceful foliage, vigorous constitution, and easy cultivation, justly entitle it to a place in every garden.

Good plants may be obtained by making cuttings early in March, inserting them in very sandy loam, and placing them in heat. As soon as they are struck they should be potted singly in 60-sized pots, using the same compost as before. When these pots are filled with roots, which they will be by the middle of April, let the plants be shifted into 48 or 32-sized pots, according to the strength of the plants, using less sand and adding a little well-rotted manure. If compact bushy plants are required the points should now be taken off, and as soon as the plants have recovered this stopping and thrown out side-shoots, gradually harden them off until, by the last week in May, they are able to stand with impunity the outer atmosphere.

They should now be planted out in rows 6 feet apart and 6 feet from plant to plant. A position sheltered from high winds, with a good, rich, loamy soil, suits them well. During June they should again be stopped once or twice, according to the size of the plants required, taking care to maintain a pyramidal form.

By the end of September they will begin to show bloom, when they should be taken up with a good ball of earth attached and carefully potted in a compost of two-thirds loam and one-third well-rotted manure, with a liberal admixture of sharp sand. If kept rather close, and shaded from bright sunshine, giving them a liberal supply of water, which they at all times enjoy, they will make new roots in a few days, and be ready for removal to the conservatory.

They will continue to flower during the autumn and far through the dark winter months, after which they may be consigned to the rubbish heap, with the exception of one or two plants from which to obtain the requisite cuttings.—THOMAS WINKWORTH, *Elmham Gardens*.

VARYING THE ARRANGEMENT OF COLOURS IN FLOWER GARDENS.

In planting flower-beds for a succession of years, however pleasing in itself any one arrangement of plants and colours may be, still when repeated, or even slightly modified, in the course of some years it acquires an appearance of sameness. With the view of lessening this in some measure, I have, so far as the means at command would permit, altered the arrangement of colours; having, while young, had a lesson from seeing the plants in a greenhouse made to change places and face in a different direction from that which they previously did. This simple means of itself often gives a very refreshing appearance.

I have had beds of Mrs. Pollock *Pelargonium* both with and without a ring of other plants between Mrs. Pollock and the grass. It may be somewhat difficult to obtain what will be in every respect a suitable plant for the margin of a bed of this *Pelargonium*; but this year I succeeded well as follows:—For two slightly curved beds cut out in grass and raised towards their centre, Mrs. Pollock was planted rather thinly, and then all the rest of the bed was planted rather closely with *Lobelia erinus*. The effect when the beds were viewed from a short distance was very pleasing, for the close carpet of the blue *Lobelia*, with its slender flower-stems shooting up, contrasted well with the foliage and flowers of Mrs. Pollock.

In ribbon borders I formerly had by way of change, in front, next to the grass, or rather next to the *Lobelia*, *Gnaphalium lanatum*. This is well known to become too strong, but nothing bears pinching better to keep it within proper limits. By way of making a change I planted the *Gnaphalium* and the *Lobelia* together as one row next the grass, knowing, of course, that much and frequent pinching would be necessary to keep the *Gnaphalium* from smothering the *Lobelia* altogether. However, the trouble taken in doing this was amply repaid by the appearance of the edging, consisting of a foot or more in width

of the *Gnaphalium*, kept low and moderately thin, and forming a light, soft, and cottony carpeting, through which peeped the numerous tiny spikes of the blue flowers of the *Lobelia*. This edging was in front of a row of *Aurea floribunda* *Calceolaria*, backed with *Pelargonium* Tom Thumb.

Another change of edging which I tried this year in front of *Calceolaria Aurea floribunda*, was to plant *Verbena Impératrice* Elizabeth amongst the blue *Lobelia*. These associate very well together as to height and strength of growth. Owing to the dwarf habit and fine foliage of this *Verbena* it is easily kept within proper limits; and its light-striped, pinkish-looking flowers gave a somewhat subdued appearance to the otherwise deep blue of the *Lobelia* when the bed was seen from a short distance off. I shall try these again.—G. Dawson.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

ARISTOLOCHIA GOLDIEANA (Rev. Mr. Goldie's *Aristolochia*).—*Nat. ord.*, *Aristolochiaceæ*. *Limn.*, *Gynandria Hexandria*. This native of Western Africa bears the largest of known flowers, they being more than 2 feet in diameter. Inside they are purple variegated with orange; outside they are pale green with purple veins. Their smell is very offensive.—(*Bot. Mag.*, t. 5672.)

LILIU LEICHTLINII (Max Leichtlin's Lily).—*Nat. ord.*, *Liliacæ*. *Limn.*, *Hexandria Monogynia*. Native of Japan, introduced by Messrs. Veitch & Sons. Yellow, spotted with crimson. Much like *L. tigrinum*.—(*Ibid.*, t. 5673.)

CELOGYNE HUMILIS (Dwarf Pleione).—*Nat. ord.*, *Orchidacæ*. *Limn.*, *Gynandria Monandria*. Native of Sikkim, Nepal, &c., at elevations of 7000 to 8000 feet. Grows in moss and on trunks of trees in shady places. White, lip streaked with crimson. It must be grown in a pot in the coolest and shadiest part of the house.—(*Ibid.*, t. 5674.)

BEGONIA CLARKEI (Major Trevor Clarke's *Begonia*).—*Nat. ord.*, *Begoniaceæ*. *Limn.*, *Monœcia Polyandria*. Native of Peru. Flowers scarlet.—(*Ibid.*, t. 5675.)

CYMBIDIUM HUTTONI (Mr. Hutton's *Cymbidium*).—*Nat. ord.*, *Orchidacæ*. *Limn.*, *Gynandria Monandria*. Flowers yellow, thickly spotted with crimson. "C. Huttoni is a native of Java, and is named after its discoverer, Mr. Henry Hutton (at the request of Messrs. Veitch), in commemoration of his zealous services and early death. Mr. Hutton, a most ardent student and promising collector (son of the Mr. H. Hutton, head gardener to the Right Honourable Lord Houghton), was sent to the East by the Messrs. Veitch, and after twelve months' residence in Java, when, as was hoped, he had become inured to the climate, he fell a victim to his enthusiasm. The plant which commemorates his services flowered with Messrs. Veitch in June of the present year."—(*Ibid.*, t. 5676.)

HUYSH'S VICTORIA PEAR.—"This is another of the series of seedling Pears raised by the Rev. John Hayshe, of Clysthydon, near Exeter, and is also, we believe, the first of them that fruited. It is now some years since *Victoria* and *Prince of Wales* made their appearance together, the latter being then named Hayshe's Bergamot, from the flavour somewhat resembling that of Gansel's Bergamot, its male parent. From the time these two Pears were first submitted to the most competent fruit judges of the day, they acquired a popularity they have since continued to maintain; indeed, there is every probability that they will not cease to be regarded as ranking among those that are best adapted to the soil and climate of this country.

"*Victoria* has been so long under trial in every kind of soil and situation, that its reputation as a hardy and prolific Pear is now well established; and these two qualifications, coupled with the equally important one of being an abundant bearer, recommend it not only to the private grower, but to the market gardener and orchardist. For the latter it is well adapted, on account of its vigorous growth, and the large dimensions which it acquires. The season, too, at which the fruit is in perfection, when most of the best kinds are passed, is one of its great recommendations.

"The fruit is medium-sized, oval or almost cylindrical, flattened at the ends. Skin yellowish, freckled and veined with russet. Eye small and open, set in a shallow depression. Stalk very short and thick, inserted without depression on the end of the fruit, and sometimes obliquely inserted as in *Beurré d'Aremberg*. Flesh yellowish, melting, rather gritty at the

core, juicy, rich, sugary, and vinous. It is in use during December and January."—(*Florist and Pomologist*, vi. 237.)

NOTES AND GLEANINGS.

MR. JAMES CUTHILL, the well-known florist and market gardener, died on the 5th inst. at his residence, Denmark Hill, Camberwell, aged sixty-two. He was gardener to Laurence Sullivan, Esq., Broom House, Fulham, in 1834, and at that time evinced his originality by advocating storing the roots of Scarlet Runner Beans in the autumn, and replanting them in the spring for early forcing. In 1836 he was gardener to Capt. Trotter at Dyrham Park, near Barnet, and continued contributing to the "Gardener's Magazine," chiefly on kitchen garden culture. In 1839 he became a market gardener and florist at Denmark Hill, and favourably known as a supplier of Mushrooms, Melons, and Cucumbers to Covent Garden Market. For the vegetable last named he had been awarded a prize by the Royal Horticultural Society in 1834, and he now published a "Treatise" on its cultivation. In 1850 appeared his "Practical Instructions for Cultivating the Potato," and more than a dozen other subjects. In 1851 he published "Market Gardening Round London," and in 1860 "Culture of the Strawberry."

—Two hundred pounds was the share of the profits of the Royal Horticultural Society's Exhibition at Bury St. Edmunds to which the guarantors were entitled. That sum has now been paid, and the guarantors have presented £70 in equal proportions to Mr. Clay and Mr. D. T. Fish, for their services before and during the Exhibition. The remainder of the money has been presented to the Bury Horticultural Society, to be kept as a separate fund, and as a memorial of that successful Exhibition.

WORK FOR THE WEEK.

KITCHEN GARDEN.

COLLECT all decaying leaves wherever they appear, and carry them to the manure-heap. Stir the surface between the rows of *Cabbages* and other winter crops, where it is practicable. *Coleworts*.—As those full grown and that have heads like young *Cabbages* are rather impatient of frost in a severe winter, it is advisable to take them up at this period, and lay them in near the frame ground as thickly as they can be placed. They are then covered up as soon as slightly frozen, with new straw, laying a few stakes on them to prevent the wind moving the straw. By this plan the ground is at liberty for trenching, and fine young *Cabbages* are preserved with certainty all through the winter.

FRUIT GARDEN.

Continue removing and planting all kinds of fruit trees as previously directed. Take care that the fibres are laid in a natural position, and that they are not reversed by throwing the soil directly against them, instead of scattering it so as to fall down amongst them, on moving the spade in a direction from the stem towards the extremities of the roots. Standard trees should be secured from shaking by the winds as soon as planted, and if all kinds can be mulched to protect the roots from frost, so much the better. As soon as Gooseberries, Currants, and Raspberries, are pruned, the ground should be manured, and dug or forked over; the latter proceeding is to be preferred with regard to the Raspberries. In young plantations of Gooseberries, the ground should be trenched between the rows in advance of the roots. Unnail and prune Peach and Nectarine trees, fastening the principal branches so that they may not be overstrained or broken, but the shoots of last summer will be better matured by remaining exposed away from the wall whilst the weather is not severe. In planting fruit trees it is of great importance so to prepare the soil that the trees shall be as far as possible independent of extreme seasons, whether of moisture or drought, and to take care that they do not make superfluous wood, thereby giving much extra trouble to the pruner, inducing an immature condition, and choking the surrounding vegetables or flowers. To accomplish this it is found by experience, that limitation at the root is absolutely necessary, more especially as to depth. Thorough draining is the first step, provided the soil is retentive of moisture. This being properly accomplished, some good strong loam should, if possible, be provided, be the soil what it may (unless the garden is new, and the soil of a loamy character), in order to mix with and refresh the old soil, which, in the majority of gardens, is effete, or worn out, however imposing its colour or consistence

may be. It is considered that 18 inches of sound soil are sufficient for the average of fruit trees, better than a greater depth, provided top-dressings are made use of in very dry and hot periods. We will now enumerate a few of the most useful fruit trees, according to our experience, and which ought to find a place in small as well as large gardens, merely premising that the list is not to be considered complete in itself, but merely as furnishing a few hints. Of *Pears*, procure the Jargonelle, Dunmore, Marie Louise, Aston Town, Althorp Crasanne, Fondante d'Automne, Passe Colmar, Winter Nelis, Glou Morceau, No Plus Meuris, and Beurré de Rance. *Peaches*—Early Purple, Royal George, Noblesse, Bellegarde, and Late Admirable. *Nectarines*—Elruge, Violette Hâtive, and Old Newington. *Apricots*—Breda, Royal, Shipley's, and Moorpark. *Plums*—Précoce de Tours, Orleans, Purple Gage, Washington, and Ickworth Impératrice. *Cherries*—May Duke, Downton, Elton, Bigarreau, Late Duke, and Morello. These stand nearly or quite in the order of their ripening. In addition to these, of *Apples*, procure the Early Harvest, Kerry Pippin, Early Nonpareil, Ribston Pippin, Pearson's Plate, Pitmaston Nonpareil, Old Nonpareil, Starmer Pippin, and Lamb Abbey Pearmain, all table fruit. As kitchen Apples, Manks and Keswick Codlins, Bedfordshire Foundling, Blenheim Pippin, Dumelow's Seedling, Wheeler's Russet, and Northern Greening. To these might be added many others of most excellent character. Any one, however, desirous of planting a moderate-sized garden would do well to obtain these kinds.

FLOWER GARDEN.

All plants liable to injury from severe weather, and which are requisite for another year, should be placed under protection without delay. Such as Fuchsias, Lobelias, Pelargoniums, shrubby Calceolarias, Salvias, Tigridias, &c., will require this treatment. Modes of storing these differ in different situations. Some persons can afford pits, some even can spare house room, and some are driven to the cellar. Whatever mode be adopted, let it be borne in mind that confined damp is nearly as prejudicial as frost. A lean-to shed is a very good place, and plants with a ball of earth dried on them, after the manner of Dahlias, will keep very well there plunged in coal ashes, with the addition of an old mat and a little straw over the shed during very severe weather. The different kinds of soils and manures should now be removed to sheds for winter and spring potting, and a fresh supply collected and ridged in the compost-yard for next summer's use, keeping such kinds separate. As the leaves are nearly all off, the lawns and walks should be swept, and the leaves used at once, or taken to some convenient place for winter supply, or to rot for manure. Any shrubs planted this autumn in exposed situations should be carefully staked and tied before they are injured by wind, and if a quantity of Fern or leaves is placed over their roots, it will protect them during winter. Planting should not be deferred till spring, it should be forwarded now as much as possible while the weather continues fine.

GREENHOUSE AND CONSERVATORY.

The conservatory will now occupy considerable attention, as all the floral strength must be brought to bear in this important structure, it being the chief resort of the family in inclement weather. See that constant and liberal supplies of all winter-flowering plants are always ready to succeed each other, and that they are placed to the greatest advantage in the house. Much depends on the arrangement of them. This, in fact, deserves the careful study and attention of all gardeners.

STOVE.

It would be well to remind the amateur that he must be exceedingly cautious not to overheat the house, as this would cause the plants to start into growth, a circumstance which would be very injurious at this season. Many stove plants are apparently always in a growing state, but rest them now if possible. Those required for winter-flowering may be placed in the forcing-pit until they develop their flowers, when they should be removed to their original quarters, where they will be maintained longer in flower in their colder and drier abode. Be very particular in watering plants under glass, as the day of trial with them is now at hand, and if kept in a comparatively hardened state through the winter, and nearly inactive, they will withstand the injuries always resulting from winter forcing, unavoidable in very severe weather.

FORCING-PIT.

Now that the leaves have fallen, it will be easy for those who have a pit at liberty to prepare it for flower-forcing. The leaves should have a portion of well-wrought dung mixed with them, if to spare; this will bring the leaves into perfect action

immediately. About 9 inches of tan may be placed over the leaves in order to facilitate the plunging. Let the glass have a thorough cleaning. As soon as this is completed flowers for forcing, if in proper condition, may be introduced. Such are the various Rhododendrons, Azaleas, Moss and Provence Roses, Persian Lilacs, Sweet Briars, and Camellias. Take care, at this period especially, to introduce nothing unless it has gone through a proper course of culture during the summer, such course consisting of early-made and thoroughly-ripened wood, for unless their condition is such, it will be vain attempting early forcing. The Hyacinths and Narcissuses potted in September may now be examined, and may be introduced successively in small quantities to this pit, when their buds are 2 inches long. They should be plunged overhead at the front or darkest part of the pit, covering them 4 inches with old tan. —W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

MUCH of the work which has been alluded to as in contemplation has been finished, or partly finished, during the week.

Kidney Beans.—We have as yet had a good supply in a rather deep earth pit with protection, and we shall yet have a number of gatherings, which are useful at this season when so many crops are demanding a little help under glass. A part of the Beans seemed hardly worth keeping, and that partly owing to their not having been closely enough picked; and this part being cleared off, we had a good place for a lot of

Cauliflowers showing their heads, and which only want lifting with balls and a good watering at the roots, firming the soil, and leaving it dry on the surface, to furnish us with good gatherings ere long. Other forward Cauliflowers will follow soon. What are fit for use we have often kept a long time by removing all the large leaves and packing the plants thickly in a shed, watering the earth at the roots, and then covering the surface with dry soil. We have also kept Cauliflowers for several months by removing all the leaves except the smaller ones round the heads, and then cutting the stems over close to the ground, and firming these stems in sand in a shed from which sun and frost were kept out, air being admitted in mild weather. We have thus kept the heads fresh for use, until even the cut-over stems began to throw roots into the soil. When the leaves are removed, the juices stored up in the stems will keep the heads fresh for a long time under such circumstances, little attention being needed except removing any small leaf that may be showing signs of fading. Such a leaf lying upon part of the head would soon discolour and ultimately cause it to rot. When long kept in this way the heads will open a little, and to ensure crispness they will require to be thrown into a pail of water an hour or two before cooking. We have kept Cauliflowers also in the passages of ice houses, and even in ice houses, but we always found that whatever remained long about an ice house lost its flavour. Even a hanch of venison when put there to keep, though fresh to appearance, has none of the fine flavour it has when hung in muslin bags, to keep away all intruders, in a dry, shady, airy place. To have Cauliflower plants, however, well rooted and well leaved, and just showing their heads, success depends on lifting them properly, protecting from frost, giving all the light possible, and plenty of air except in cold wet weather.

There is for such purposes of protection nothing more economical in the end than wooden shutters of from half to three-quarters of an inch in thickness, and with three cross-pieces beneath to keep the boards together. From 3 to 4 feet in width is a useful size; and when used for turf pits, and there is a rail back and front for the covers to rest on, they will last many years, and be lighter to move every year. When thoroughly dried after a year or two of use they might be tarred on the outside; but for many such purposes we have our doubts if painting, or even tarring, does much in the way of preservation. We are certain that doing either to wood at all green and unseasoned greatly accelerates rottenness and decay. We have examined boards used for barns and sheds, that were pretty well charred, and all the strength of the fibre of the wood removed, by the great heat absorbed after painting them with tar. After being well seasoned, tar or anti-corrosion paint will keep wet from soaking into the wood, and thus dryness will act as a preserver. If wood is made smooth on the outside surface, however, little wet will be absorbed, even when unpainted, unless it is placed in a nearly horizontal position.

Celery.—An almost unexampled week of frosty mornings,

with clear sunshine and dryness during the day, furnished a good opportunity for housing most of the vegetable roots, and putting the finishing strokes to Celery so far as the earthing-up is concerned; for, rather than earth-up high with soil, we prefer before the frost comes to put between the plants a few inches of dry litter shaken out from the stable dung. This litter in the case of Celery beds, as most of ours are, we leave highest in the middle, and thus it acts as a rude thatching in throwing the water to the trench at the sides. In severe frost we like to have a few heaps of dry litter to throw thinly over the tops of the plants, but that is carefully removed and left for future use as soon as the frost is gone. Before earthing-up we generally throw a little mild lime and ashes among the plants and over the beds, and in earthing-up work in some fine-sifted cinder ashes round each plant. This is easily done by placing the well-pulverised earth not close to the plants, and then throwing in a little ashes before firming the soil round the separate heads. When long ago we grew Celery in sunk beds from 4 to 6 feet in width, we used boards to place across between the rows when earthing-up, and then a little ashes could be trickled down inside of the boards before moving them; but we seldom use boards now, as, unless the workman is careful, he is apt to let the boards lean too much against the Celery, and thus crack the leaves. By merely loosely tying-up each plant we save all this trouble.

If there are some of our readers who wish to do their beds or even rows more neatly and effectually, then we would recommend them to have half a dozen semicircular tin or zinc pipes, 3 or 4 inches wide, and some 15 inches in length. Old spouting that is too worn out to take the water from a building, cut into lengths, will suit very well. Two of these placed against a plant, so as to enclose it, will permit of a thin layer of ashes round it, and the earth may be placed round before removing these semicircular pipes. The object of all this care, but which in reality and in practice involves but little more labour, is to keep slugs, snails, and worms from nibbling and discolouring the Celery. Even the tying up each head, besides helping to blanch early, is not labour lost, as the earthing-up is done so much more easily. Generally we are content with beds 4 feet in width, in which we grow three rows. Our Celery looks very well and turns out well, and never gave us less trouble, as the rains in summer saved us all, or nearly all watering. After watering at planting-time we think we only watered once afterwards.

Mushroom-bed.—Earthed down the first piece in the Mushroom-house, which will come in to succeed the beds in the outside shed, and have thrown a lot of droppings and a rather larger portion of short litter in a heap in a shed to heat and become somewhat drier. We would have preferred drying it in thin layers, but we did not want to wait so long, and hardly expected we would have had so much fine weather. The placing in a heap will ensure dryness at the loss of some of the richest properties of the manure. When manure has thus been heated, and is used for shallow beds, say from 9 to 14 inches in thickness, and thick juicy Mushrooms are liked, then it would be advisable to use a casing, after spawning, of moister droppings, or of cowdung a little sweetened, fully 1 inch in thickness. Thick fleshy Mushrooms, however, are often objected to, as requiring much more pains to cook them thoroughly.

FRUIT DEPARTMENT.

We have had little but a continuation of previous work here. Never was there better weather for fresh planting all kinds of fruit trees, and so far as our limited observation extends, the buds and wood in general are well ripened. For directions for doing this work, we cannot improve on what was said in previous numbers. To all with small gardens, we would say, Plant some bush or pyramidal fruit trees, and keep them small and a mass of fruit-buds, by the pinching system during summer.

We have two inquiries from amateurs similarly situated, who have each a small glass-house unheated, and would like to have some fruit from trees in pots next season, but they say they cannot afford to buy plants already established in pots, that plants apparently as fine in the open ground in the nursery are much cheaper, and the inquiry is, Would not these, if carefully potted now, answer their purpose equally well? To this we say, Decidedly not, or what would pay the nurseryman for potting and watering these trees in pots for a season before he had much or any fruit from them? The establishing of the roots in the pots is of great importance. Unless that is done, your plants will seem to thrive well enough, but it is a great chance, though the bloom-buds open, that they will fail to set the fruit; not but

that success may be attained with extra care and labour, as we have had a good crop of Cherries in May and June, from plants sent in a straw bundle without earth in March, or but little earth hanging about the roots, as the weather was dry when they were lifted from the nursery. Your only chance, if you have plants taken up from the ground, and with little of a ball, but possessing well-ripened wood, and prominent fruit-buds, is to do as soon as you can, what we did rather late, but which, nevertheless, suited our purpose—namely, pot the plants as soon as you can obtain them, and in pots not too large, but so as to get the roots in, spread out the fibres, and pack them as firmly as possible in fresh and sweet dry loam, with but a little sweet, decayed manure in it, and a few bones at the bottom of the pot. Water, and allow the water to drain off. Then with any material you can easily command, dung, litter, tree leaves, or any thing of that kind, make a bed in the open air from 15 to 18 inches deep, so that as it ferments slowly it will yield a heat of from 70° to 75°, or even 80° just at first, as it will soon begin to decline, but not higher than 80° even at first. In this bed plunge the pots up to the rim, and as the heat sinks to 60°, cover the bed and the surface of the pots all over with 2 or 3 inches of dry litter. If the winter should prove severe, and a trial stick or a thermometer in the bed shows that your bed is little or no warmer than the common garden soil, take the plants up in a mild day, turn over the heap again, add a little more fermenting material, re-plunge, and again cover the surface of the pots and the bed with litter. The top of the tree being fully exposed, will show little of the effects of this treatment, but the roots will be progressing in your fresh soil, and, therefore, ready to meet the demands of the swelling and opening buds, when you have taken these pots into your houses. This operation requires a little attention, but unless something of this preparation is given, or you can obtain plants with good balls, we would advise you not to be very sanguine as to the results to be obtained from plants taken up from a nursery, and potted between this and the spring. They will, if fairly managed, give a good return in the second year, but will not do to be depended on the first summer. Were it otherwise, dealers would not pot, and pinch, and water their trees.

We may also add that every fruit tree and bush will thrive in such a house, but Apricots, Gooseberries, and Currants, will want almost constant ventilation before setting their fruit, and that, perhaps, of all other trees, Cherries, Plums, and Peaches, give the greatest yield with least trouble. Cherries and Plums also require plenty of ventilation, and freedom from a close atmosphere until the fruit is set, and then the fruit may be brought on quicker, by shutting mostly up early in the afternoon, and opening, or giving air, early in the morning.

ORNAMENTAL DEPARTMENT.

We have been busy moving shrubs and trees, fresh turfing, laying-out lawns, &c. We never experienced better weather for such operations. We were surprised that some large shrubs, after all the rains in summer and autumn, had the soil about them so dry, that had we known it, we would have made some holes, and given the earth a good watering eight or ten days before moving them. There is hardly, however, a disadvantage but has its countervailing advantages. The soil being dry and firm, rather better balls were obtained than if it had been wetter and heavier, and the plants from being lighter were more easily moved, and then the watering and fresh soil would set the roots moving at once. For shrubs and trees of a good size, but not so large as to require horse power, and the moving of which with a ball is of importance, nothing is better than a low, narrow truck, with wheels about 1 foot in diameter. When this is brought underneath the ball, or far enough under one side to bring the bulk of the ball and the top on it, it is easy to take a heavy shrub to a good distance. It is as well to have the wheels broad, so as not to cut lawns, &c. Ours are merely of wood from 2 to 3 inches thick, but then we choose dry days, and when walks and lawns are hard. But for being cumbersome the wheels would be better if double or treble the breadth.

For turfing and levelling, the weather has been most suitable. Nearly double the work could be done that could be performed in sloppy weather, and there would be little danger of workmen becoming affected with lumbago and rheumatism from contact with the cold, wet earth.

There is an old proverb that "Nothing is so straight as a gardener's eye," but we have had many proofs that from trusting to that in groundwork much work has to be done and undone, and done again, before it can be left at all satisfactory.

In all levelling and turfing of any extent it is best in every way to settle at first on the levels, sweeps, and slopes, placing pins, stakes, or other standing marks at the right height, and give the workmen a tight line between to regulate their work. All fresh work should also, if holes or deep gullies are to be filled up, be well rammed in thin layers before turfing, or the want of this care will show itself more and more every year. Even this care will not always be effectual. We turfed over a long border two years ago, and as it was particularly important that a right level should be kept to sweep with the neighbouring ground, we were told that we were over-particular in this ramming; but with all our care, though no fault would be noticed by a stranger, we, whose duty it is to see and look for such faults, can already perceive some irregularities, and to make the surface as it ought to be the whole of the turf should be taken off in a year or two, the slight inequalities levelled, and the turf put down again. This, from the little that would be wanted in the way of earth and levelling, would involve scarcely any labour beyond taking up the turf and laying it down again.

Forcing Shrubs, Roses, &c.—For early work this should be done very gradually, and a sweet gentle bottom heat greatly assists. We have had inquiries, much the same as in the case of orchard-houses, as to forcing shrubs and Roses taken up at once from the soil; and to them we would reply, that to force at once, the plants must be established in the pots. To bloom in spring Roses, Lilacs, and Rhododendrons may be potted now, but the first two at least will do best if they are treated as recommended for orchard-house trees, so that fresh roots shall be established in the pots before the plants are placed in heat to expand their buds.

Centaurea candidissima.—As an illustration of what may be done with a little bottom heat in general, and with this white-leaved plant in particular, we will mention how we have treated it for the benefit of those who find a difficulty in securing a sufficient quantity. Three years ago we had more than we knew what to do with, and from a small beginning. These plants were for the most part struck from cuttings in July, and allowed a long time to root in a cold pit. That time is late enough for summer cuttings. They ought to be in before the middle of August. Slips strike readily in spring, and these slips come freely when you nip out the terminal bud of a shoot. We delayed taking cuttings that year, not wishing to interfere with the symmetry of our lines, and then we took up the plants, shortened the tops, and potted them as described two years ago. They did not succeed at all according to our expectations, and we attributed the comparative failure to the plants standing about for a week or two before we could pot them, and then having very little heat after potting. We have not had any very abundant supply since, as, if you have no strong plants to go to, you may look in vain for hundreds of nice stubby cuttings to place in heat in the spring. We could not obtain so many cuttings early this season as we wanted; and therefore to make sure, as mentioned about three weeks ago, we took up a good number of our plants—fine plants too, and which will be bristling all over with good shoots before the spring; and as each plant if possible looks fresher and better than its neighbour, we will detail the treatment. We are convinced that by pursuing this mode of management we may trouble ourselves little with summer propagation, and more especially because the smallest rooted plant in April will be large enough for general purposes in summer.

A few of the largest leaves were disfigured and showing signs of damping; these alone were removed from the plants, and thus almost the whole of the leaves were left untouched. The plants were then carefully lifted with a fork, and to most of them a little ball adhered. They were then taken carefully to the potting-bench, preserving their leaves entire, and transferred singly to pots 5, 6, or 7 inches in diameter, according to the size of the plants and ball. These were well watered—the soil, we mean, without watering the leaves; and when the pots had stood to drain, they were moved and plunged for three-fourths of their depth into such a bed as described last week. The sashes were put on, but a little air was left on top and bottom night and day, that the tops might be cool whilst the roots were encouraged. In one or two bright days they were very slightly shaded for two or three hours, but they bore all the other sun without flinching. In ten days after potting the soil seemed very dry, and yet the tops were looking brisk and lively; and before watering we turned out a number of pots, and in every case the fine, large, healthy roots were traversing the outside of the balls, and before this is printed the

soil will be one network of roots. We have lifted the plants on the surface of the bed to harden the roots, and henceforth the plants will be safe for the winter, where they can be kept airy, rather dry, and free from frost. The bottom heat will then be available for other fresh-potted plants.

As another peculiarity of this *Centaurea*, we may mention that the roots are very brittle. When propagating in heat in spring, the roots are apt to be broken when a number of cuttings are rooted in one pot or pan. Where room, therefore, is not an object, it will generally be preferable to put every cutting singly in a very small pot, and then transfer it to a larger small one when struck, and no mutilation of the roots will then take place.—R. F.

COVENT GARDEN MARKET.—NOVEMBER 13.

Our supplies are scarcely so plentiful as they have hitherto been, and prices remain about the same. Pears consist of Marie Louise, Chantrel, Beurré Diel, and Van Mons Léon Leclerc. Apples of Ribston Pippin, Cox's Orange Pippin, Court of Wick, Golden Pippin, and others. Good Potatoes are in fair request; in those of inferior quality the trade is very dull.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples ½ sieve	2	0 to 3	Melons..... each	3	0 to 5
Apricots doz.	0	0 0 0	Nectarines doz.	0	0 0 0
Cherries lb.	0	0 0 0	Oranges 100	8	0 14 0
Chestnuts bush.	8	0 14 0	Peaches.....doz.	8	0 15 0
Currants..... ½ sieve	0	0 0 0	Pears (dessert) .. doz.	2	0 3 0
Black do.	0	0 0 0	Pine Apples lb.	4	0 0 0
Figs doz.	0	0 0 0	Plums ½ sieve	4	0 6 0
Filberts.....lb.	1	0 0 0	Quinces doz.	2	0 3 0
Cobs..... lb.	1	0 0 0	Raspberries.....lb.	0	0 0 0
Gooseberries .. quart	0	0 0 0	Strawberries..... lb.	0	0 0 0
Grapes, Hothouse.. lb.	1	6 4 0	Walnuts..... bush.	10	0 16 0
Lemons..... 100	8	0 12 0	do. per 100	1	0 1 6

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes..... doz.	2	0 to 4	Leeks bunch	0	3 to 0
Asparagus bundle	0	0 0 0	Lettuce..... per score	1	0 1 6
Beans, Kidney, ½ sieve	0	0 3 6	Mushrooms.... pottle	2	0 3 0
Scarlet Run. ½ sieve	2	6 3 0	Mustd. & Cress, punnet	0	2 6 0
Beet, Red..... doz.	2	0 3 0	Onions.... per bushel	3	0 5 0
Broccoli bundle	0	6 1 6	Parsley..... per sieve	3	0 0 0
Brus. Sprouts ½ sieve	2	0 2 6	Parsnips..... doz.	0	9 1 6
Cabbage doz.	1	0 1 6	Peas..... per quart	0	0 0 0
Capsicums..... 100	2	0 3 0	Potatoes..... bushel	3	0 4 6
Carrots bunch	0	6 0 8	Kidney do.	3	6 5 0
Caiflower doz.	3	0 6 0	Radishes doz. bunches	0	9 1 0
Celery bundle	1	0 1 6	Rhubarb bundle	0	0 0 0
Cucumbers..... each	0	6 1 0	Savoy doz.	0	9 1 0
pickling doz.	2	0 0 0	Sea-kale basket	0	3 6
Endive doz.	1	0 0 0	Shallots lb.	0	8 0 6
Fennel bunch	0	3 0 0	Spinach bushel	2	0 3 0
Garlic lb.	0	8 0 0	Tomatoes..... per doz.	2	0 3 0
Herbs bunch	0	3 0 0	Turnips bunch	4	0 0 0
Horseradish .. bundle	2	6 4 0	Vegetable Marrows, dz.	1	0 2 0

TRADE CATALOGUE RECEIVED.

Messrs. F. & A. Dickson & Sons, 106, Eastgate Street, and Upton Nurseries, Chester.—*Catalogue of Forest Trees, Hardy Ornamental Trees, Plants, &c.*

TO CORRESPONDENTS.

*** We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

Books (*Clericus*).—Thompson's "Gardener's Assistant." It is published by Blackie & Son. (*A Young Gardener*).—It is published in two volumes, price, Vol. I., £2 10s.; Vol. II., £1 17s. 6d., and cannot now be obtained in monthly parts. Possibly you might pick up a copy at the bookstalls.

Mrs. PINCE'S BLACK MUSCAT GRAPE (*S. E. H.*).—It does not require so much heat as the Muscats, but may be grown in an ordinary vinery.

STOCKS FOR GRAFTING (*G. M.*).—We do not know where you can obtain these in quantities. You had better advertise, stating what you require.

HIBISCUS ESCULENTUS (*R. L. T.*).—It is a tender annual, and is popularly called "Eatable Okro." The young pods are put into soups, or made into a pickle. They are full of mucilage, and with the addition of butter and spice form a very rich dish. The seeds are boiled like pearl barley.

SEEDLING APPLE (*C. J. A.*).—Send ripe specimens to the Fruit Committee, Royal Horticultural Society, South Kensington. The Pomological Society died years ago.

STAR PINKS.—"A Star Pink, I can inform you, is a flower round as a disc, no serrated edges, "Rose-leaved," no lacing to the petals, all the colour being in the centre of the flower. A Star Pink is an elegant flower, several of them being either lilac or purple; but the most prized are pure snow white without a single speck. Formerly there was a separate class for Star Pinks.—F. DAVIES, *Pershore*.

DRYING AND PRESERVING LEAVES (An Inquirer).—Spread them flat between sheets of blotting paper. Press them with a laundress's hot flat-iron until dry. Fasten to a sheet of cartridge paper by a stitch across the stalk, and keep in a dry place.

IVY (F. W.).—Ivy will preserve rather than injure the church wall against which it clings. Flowers ought not to be grown on a Vine border.

HEATING TWO HOUSES FROM ONE FIRE (G. P. T.).—Your plant is right-named. We think to heat two houses, independently of each other, from one fire and boiler, it will be best to have the furnace in the centre instead of at one end. The flow pipes right and left may then be furnished with valves, or the flow pipe may go at once into a cistern, and from thence be taken right and left to the two houses. Valves or plugs will shut off, let on, or regulate at pleasure. We quite approve of using a flue in the other case, so as to secure all or as much heat as you can from the fuel. There is no hot-water apparatus that can be made to absorb all the heat from the fuel consumed. Hence the more furnaces with boilers the more the loss of heat.

HEATING A VINERY (J. M., Dartmoor).—By telling us that the tank referred to, page 319, is in reality the boiler, we see daylight in what seemed to us very strange. We are not surprised that you have so little heat. You say you can adopt our suggestion of lessening the water capacity of the end tanks. You can just as easily do so in your large pipes by merely having them half full. This you may not be able to do with your tank boiler; but you will easily manage it with a middle-sized saddle boiler sunk several feet below the level of the pipes. Of course you can only keep the water on this level in the pipes if the pipes are themselves level. If not, very likely it would be better to have a fresh arrangement of pipes; but if the deep ones are good they can be made to answer.

HEATING A PIT (A. B.).—The obtaining heat in a pit filled nearly to the glass with soil, from a greenhouse heated by a flue, by merely making a hole in the party wall between them, will greatly depend on the position of the flue as respects the pit. If the flue is lower than the atmosphere of the pit to be heated, and if an opening, say 2 feet by 18 inches, were made in the end of the pit, the atmosphere of the small pit would be nearly of the same temperature as that in the house at a similar height from the flue. Your filling the pit with earth would be against its heating, unless there was a space all round to let the heat up and there was a chamber beneath for the heat from the flue to pass through, and this would be best done if the flue were near, by shutting in that part of the flue opposite the pit, and thus causing the heat to pass through the chamber instead of at once rising into the atmosphere of the house. If your flue goes near the end against which the pit abuts, the most effectual plan would be to take a turn of the flue through the pit. We once did this very simply in a similar case, where the floor of the pit was 6 inches lower than the top of the flue—two holes were made in the flue to let in six-inch earthen pipes, and these were carried round the little pit. A damper, placed in the main flue, regulated the heat to these earthen pipes, and when little heat was wanted in them the damper was taken out and the flow of the flue went on as before. The pipes were joined with mortar, which did well enough, as they were a good way from the furnace.

STOVE FOR A CONSERVATORY (Stove, D. D.).—Any stove, either of iron or brick, will do to keep frost out of a conservatory, provided it is large enough for the purpose. A lean-to house 50 feet long, 10 feet wide, 6 feet high in front, and 11 feet high at back, with a good wall there, we should consider safe from the frost if it had an iron stove 21 inches square, and from 30 to 36 inches in height. To insure safety and success the firebox, say 14 inches square, should be secured in the centre; a horizontal pipe, 4 inches in diameter, fixed 6 inches from the top, should not be longer than 2 feet; and an upright pipe from that should go out of the house. Before cleaning out, the ashes, &c., should be sprinkled with a little water. We like brick stoves best, as they keep heat longer; but then you cannot well remove them in summer. Such a stove might go under a stage and remain, or in a prominent place have a vase set on it in summer. See last week's number for many hints. Of course smaller stoves will do for less places; but much of the evil of stoves has come from their smallness.

TREATMENT OF BORDER INSIDE A VINERY (Tulip).—If, as you say, your wood of the Vines is very well ripened now, we would remove from the surface all the manure you have given, and dress with half a dozen bushels of crushed bones and some lime rubbish, and cover the outside borders with dry litter, rather to keep heat in than to send it in, and then we would water only when dry. It strikes us you had overdone the dressing and rich watering. A thin rich mulching in summer, not to keep out the sun heat, would be better than so much dreneching. When you start, commence with 45° to 50°, instead of 55° to 60°.

GRAPE (J. Bryn).—No. 1 is true Trencham Black, and the variety you have for Black Muscat is Black Monukka, which this year appears to have set more seeds than it usually does. It is evident that the word Monukka has been read Muscat. It is a difficult thing to advise you what to do with your Alicante. We cannot counsel you "to grub a young healthy Bowood Muscat" to make room for it unless you are overdone with Muscats; neither can we recommend you to graft the Alicante either on the Muscat or Lady Downe's after the singular results that have followed experiments of the kind, and the influence that various stocks exert on different varieties. It is just possible that in either case you might sacrifice both your Bowood Muscat and Lady Downe's, and not succeed in obtaining good Alicante. If any of our readers have had any experience of working the Alicante on either the Muscat or Lady Downe's, we should be glad if they will communicate it. (S. C.).—From your description we conclude the Grape given to you as the "Muscatell" is the Muscat of Alexandria.

APRICOT BLOSSOMS NOT SETTING (A. J. B.).—We should think that the non-setting of the blossom arises from the roots having penetrated into a hard unstirred bottom, which is not sufficiently moist in autumn and winter. The tree being young, we would take out all round a trench about a yard from the stem, and with a fork remove all the loose soil about the roots. We would then lift the tree carefully, preserving as many

of the roots as possible. The roots should be protected from the atmosphere by some mats thrown over them. Immediately after taking up the tree trench the ground 3 feet deep for a space sufficient to plant the tree again, working in a liberal addition of turf from a pasture where the soil is a good sandy loam. This done, the tree may be placed upon the trenched ground, and no higher than the old level, and the roots being spread out, they should be covered with 6 inches of the chopped turf and the old soil of the border in equal parts. A good watering may then be given, and the ground should be mulched with 3 inches of short littery manure a little further than the roots extend. The remainder of the border may afterwards be trenched—that is, that part of the border in front of the wall or space allotted to the Apricot. This, we think, will insure fruit. If the tree is old we advise the soil to be removed down to the roots, and laid in ridges parallel with the wall, and holes about 2 feet deep being made along them at every foot distance with a crowbar, fill the trenches with water, and when the water subsides refill with water twice. When the water has sunk in, level the ridges, and give a top dressing of 3 inches of manure.

PEACH TREES CASTING THEIR FRUIT (C. B.).—We should attribute the falling of the fruit before it is ripe to the want of sufficient moisture in the soil; they have pushed their roots into a hard subsoil rarely if ever made moist by surface waterings. We would advise you to lift the trees now, and to replant after properly trenching and preparing the soil as recommended in the previous answer. The only difference as to the method of lifting consists in your using soil or turf from a pasture where the soil is a strong loam, which Peaches require. Serve the Nectarine tree in the same way.

FRUIT TREES FOR A SOUTH-EAST ASPECT (Inquirer).—Your south-east aspect-wall, 30 feet long and 8 feet high, will be best covered with 1 May Duke Cherry; 1 Jefferson, and 1 Cox's Golden Drop Plum; 1 Hemscherk, and 1 Moorpark Apricot. This, we think, will be a better arrangement than a Cherry, Plum, Peach, and Nectarine; but to meet your wishes you may plant 1 May Duke Cherry, 1 Jefferson Plum, 1 Grosse Mignonne Peach, 1 Elruge Nectarine, and 1 Hemscherk Apricot. Your south aspect will answer for what you name—1 Noblesse Peach, 1 Violette Hative Nectarine, and 1 Moorpark Apricot; but if you take our advice in the case of the south-east aspect, your south wall will best be planted with 1 Elruge Nectarine, 1 Grosse Mignonne Peach, and 1 Early York Peach. All should be dwarf-trained trees, having short stems of from 6 to 9 inches from the ground to the first or lowest branches. Trees with higher stems than these will not suit you.

STOPPING SEEDLING PELARGONIUMS (S. M.).—Your seedling Pelargoniums with straight stems ought to have been stopped when they had made three joints, the points being then taken out with a knife. You may now take out the points of the shoots, which will conduce to their flowering earlier than if stopping were deferred until spring.

TENANT REMOVING TREES (Suburban).—You cannot remove any pyramid trees and Roses you have planted; but you may remove those that are planted in pots or tubs, whether sunk or not in the ground. (J. H.).—If the garden has been used by the tenant as a nurseryman he can legally remove trees, shrubs, &c. If he is not a nurseryman he has no right to remove them.

SYRINGING CHRYSANTHEMUMS (Suburban).—The Chrysanthemums now in the greenhouse ought not to be syringed. They should be kept cool, well watered, and have abundant ventilation.

LEAVING HYACINTHS, TULIPS, AND GLADIOLI IN THE GROUND (F. Paynter).—You may leave Hyacinths, Tulips, and Gladioli undisturbed in your gravelly soil. Nothing is gained by removing them every year after they have flowered, except in getting the ground clear, and much is often lost by removing them too late or too soon, and keeping them out of the ground too long, and so weakening the bulbs. They will do much better left in the ground, taking them up every two or three years for the purpose of removing offsets, and replanting the bulbs immediately the ground has been dug and enriched. You must not plant the bulbs deeply to accommodate the bedding plants, but you may so arrange the former that you can place the bedding plants between them, and thus leave the bulbs to mature.

POLYPODIUM VULGARE INFESTED WITH THRIPS (R. S. S.).—The fronds were severely attacked by thrips. Your remedy is to fill the house with tobacco smoke upon a calm evening, taking care to have the fronds dry. It should be so filled with smoke that not a plant can be seen from the outside. The fumigation ought to be repeated the next night but one. A good syringing should be given on the following day. It will be necessary to fumigate again in about a week, and for a time until the insect be subdued. It usually attacks plants that are kept in too dry and warm an atmosphere. The floors and every available surface should be sprinkled with water twice daily, and the fronds also during hot weather in summer. In a cool house where there is no fire heat this will not be necessary in winter. The remedy is to fill the house with tobacco smoke whenever the insect is seen, or the leaves exhibit the first signs of its presence.

FERN INFESTED WITH THRIPS (E. M. L.).—The Fern frond was severely attacked—indeed, destroyed by thrips. The atmosphere is much too dry, and, we think, too warm as well. Keep the air moister, but do not syringe over the foliage at this season. It will be sufficient if the floors, walls, &c., be sprinkled morning and evening with water at the same temperature as the air of the house. To clear off the thrips you should lightly sponge both sides of the fronds with a solution of 2 ozs. of soft soap to a gallon of water, the sponge being well squeezed before it is drawn over the surface of the fronds, otherwise the soap solution squeezing out in the process of washing will run down to the crown and destroy the young fronds. Wash them well twice with the soapy water, and before they dry wash them with soft water, not squeezing the sponge. This repeated a few times will clear off the pest; but if other Ferns with divided fronds are infested, and it is impossible to wash them, the house should be filled with tobacco smoke on two consecutive evenings, taking care to have the fronds dry. It will be necessary to repeat the fumigation in a week. The house should be made quite full of smoke; but do not fumigate too much, otherwise the young fronds of Adiantum and similar delicate Ferns will be browned.

WORMS IN POTS (Idem).—You must cork up the holes in the pots, or stop them with clay, and then water with lime water until this stands on the surface. It will bring the worms to the top or destroy them. If done in the morning the corks or clay should be removed in the evening,

and the drainage allowed to act. One pound of fresh lime is the proper quantity for three gallons of water, and the lime water ought to be made a day or two previous to use, and the clear liquid only employed. We have not found the plants injured by the lime water.

PLUNGING MATERIAL (E. M. L.).—Upon your flue you should have 6 inches of rough rubble, as pieces of bricks, and upon them 3 inches of the same, but finer, the dust being sifted out; and for plunging the pots you could not have anything better than sawdust to the same thickness as the pots are deep.

POTTING LILIAM LANCIFOLIUM ROSEUM BULBS (Ignorance).—The bulbs just received may at once be potted. You may have two bulbs in a seven-inch, three bulbs in a nine-inch, or five in an 11-inch pot. The pots should be well drained, one large crock being placed over the hole, 2 inches of smaller crocks upon it, and an inch of the roughest portions of the compost placed over these. Half-fill the pot with a compost of turfy light loam two-thirds, and one-third fibrous sandy peat or leaf mould, adding one-sixth of sharp sand, well mixed. Upon this place the bulbs, and then cover them about an inch over the crowns with the compost named, pressing it gently around the bulbs. Give a gentle watering, and place the pots in the coldest part of the greenhouse. It will be sufficient if the soil be kept moist during the winter, and it ought not to be saturated by constant watering. When growth takes place the watering should be more liberal, and the pot should be filled to the rim with compost when the shoots are a few inches above it. Afford a light and airy situation when they are growing.

CYTISUS IN A ROOM (W. H. W.).—It is likely the Cytisus will succeed in a room without a fire, providing you do not give more water than sufficient to keep the foliage fresh, and remove it to a room from which frost is excluded during severe weather.

CUTTING DOWN SCARLET PELARGONIUMS (Idem).—It is not well to cut back Scarlet Pelargoniums at this season, as the shoots cut are liable to die off from the wounds not healing. You may, however, remove any straggling shoots, preserving a number of the young growths. It is best to head them back in spring.

PROPAGATING TRITOMA UYARIA (C. A. J.).—Tritoma uyaria is propagated by dividing the roots, the suckers being taken off in spring, potted, placed in a cold frame, and kept close and shaded for a few days. It will also succeed if the suckers are planted in a border, and watered and shaded for a few days. It thrives in an open situation, and in a compost of two-thirds rich turfy loam and one-third leaf mould, with a liberal admixture of sharp sand. The suckers should be taken off with some root to them.

PROPAGATING PAMPAS GRASS, AND "PALM" (Idem).—The Pampas Grass may be increased by division in the same way as the Tritoma, but it is best raised from seeds, which should be sown in spring in a good loamy soil, and the seeds should not be more than just covered with soil. The pot or pan may be placed in a mild hotbed, or in a house where there is a gentle heat, and the soil should never be allowed to become dry. When the plants are up they cannot have too much light and air; and when they have grown sufficiently they should be potted off and removed to a cold frame, keeping them close and shaded for a few days; then expose them fully to light and air. Pampas Grass likes a rich, rather strong, loamy soil enriched with leaf mould or rich compost, and an open yet sheltered situation. Though delighting in moist soil and abundant supplies of water, it does not succeed in an undrained soil, or where the water becomes stagnant in the subsoil. The wild Palm generally in demand on Palm Sunday, is not a Palm, but a species of Willow (*Salix*

alba), and it is propagated by taking the shoots of the current year, and putting them in now, after cutting them in lengths of 8 or 9 inches, and so deeply as to leave two or three eyes abovesground. It succeeds in sandy soil on a wet subseil, and likes an open situation.

CONSERVATORY CLIMBERS (J. D.).—You could not have anything better for training on the trellis against the wall of the conservatory than *Habrothamnus elegans* and *Luculia gratissima*. Mârchal Niel Rose will suit you.

ROSES FOR AN ORCHARD-HOUSE (Idem).—Gloire de Dijon and climbing Devonensis, both Tea-scented; Bourbon—Aéidalie and Sir Joseph Paxton; Hybrid Perpetual—Mârchal Vaillant, Jules Margottin, Sénateur Vaisse, and Madame de Cambacérès.

PRUNING GOOSEBERRY AND CURRANT BUSHES (T. M. N.).—We think all pruning best done with a knife; but in stopping immature or succulent growths it is quite immaterial whether the finger and thumb, the knife, or the scissors be used. If by stopping the shoots you mean shortening them at the winter pruning, we have a decided objection to using scissors, and think it best done with the knife.

PRUNING APPLE AND PEAR TREES (Idem).—The standard Apple tree may be pruned to almost any extent, but it will be well to confine the pruning to the removal of any branches that, from crossing, are likely to rub against each other or crowd the head too much; and you may shorten any long shoots that grow irregularly, and by so doing you may secure a better-shaped head. If you wish to keep the tree dwarf you may stop all the shoots at the sixth leaf in July, and again at the third leaf of the second growth in August or early in September, cutting back to within half an inch of their base at the winter pruning all the shoots thus stopped, except the leaders of the branches, or those required to fill up the head. Your Pear tree may have its shoots 2 feet long cut back to half their length—that is, the leading shoots; but the lateral or side shoots should be cut-in to within half an inch of last year's wood. Your standard Rose trees would have been better planted the height of the stem from the edge of the border, for as now planted their shoots will extend over the walk, and the effect will be bad.

LABELS FOR WARDIAN CASE (C. J.).—We use the small bone labels usually attached to keys, write the names of the plants upon them, and stick the end of the label into a piece of cleft stick for thrusting into the soil.

POTATO FRUIT (W. C.).—The fruit is a berry.

NAMES OF FRUIT (A Subscriber).—1, Beurrié Diel; 3, Beurrié de Rance; 4, Napoléon; 4, Marie Louise; 6, Beurrié Diel; 7, Napoléon; 8, Beurrié de Rance; 9, Beurrié de Capiaumont. (*Richard Graves*).—1, Old Colmar; 2, Downton; 3, Beurrié de Capiaumont; 4, Beurrié Diel. (*W. W. A.*).—1, Easter Beurrié; 2, Nouveau Poiteau; 3, Baronne de Mello; 5, Autumn Bergamot; 6, Thompson's; 8, Marie Louise; 9, Comte de Lamy; 10, Belmont. The others were much decayed.

NAMES OF PLANTS (M. L. F.).—We think that your Lime tree is *Tilia americana*, or American Linden tree. (*James*). The *Cypripedium* was accidentally so injured as to be unrecognisable, and the other specimens being merely leaves, we could not attempt to identify them. (*P. E. F.*).—1, *Isolupis gracilis*; 2, *Selaginella Ludeviciani*; 3, *Alyssum saxatile*; 4, *Amaryllis lutea*. (*Rumicolumbian*).—1, No flowers; 2, *Stachys annua* (Pale Woundwort); 3, *Veronica chamædrys*. (*Try*).—*B. Viturum lantanoides*; *C. Libocedrus*; *F. Quercus cocifera*; *J. Luzuriaga radicans*. The other specimens sent are without flowers, and such scraps that we cannot name them.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending November 12th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 6	30.425	30.336	49	25	48	49	N.E.	.00	Foggy; hoar frost; cloudy; clear and frosty.
Thurs. 7	30.494	30.471	52	24	47	48	W.	.00	Heavy fog; very clear, with bright sun; low fog, clear.
Fri. . 8	30.516	30.493	54	28	46	47	W.	.00	Low fog, hoar frost; very clear; clear and frosty.
Sat. . 9	30.518	30.492	49	37	48	47	W.	.00	Foggy; densely overcast; overcast at night.
Sun. . 10	30.471	30.395	51	30	48	47	N.E.	.00	Overcast; very mild; overcast and damp; overcast.
Mon. . 11	30.399	30.180	41	26	47	47	W.	.00	Overcast; mild, heavy fog; foggy at night.
Tues. . 12	30.277	30.084	44	36	47	47	N.E.	.00	Overcast and damp; foggy; overcast at night.
Mean	30.430	30.350	48.57	29.43	47.29	47.43	..	0.03	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

THE BIRMINGHAM POULTRY SHOW.

THE entries for the forthcoming Exhibition in Bingley Hall have closed with results on which we think the Council have good cause to congratulate themselves. There is a large augmentation of the poultry department, and the collection of Pigeons will not only be the largest, but, in all probability, the finest which has yet been brought together, either in Birmingham or elsewhere. We also trust that the attendance will be larger than on any former occasion, and that the hands of the Executive will be greatly strengthened for carrying on the work in which they are engaged. The entries as compared with previous years are as follow :—

	1863.	1864.	1865.	1866.	1867.
Poultry.....	1,608	1,677	1,675	1,898	2,107
Pigeons	275	290	381	400	563

RAILWAY CHARGES FOR POULTRY.

I WAS sorry to find by "Y. E. A. Z.'s" letter that the Railway Company still persist in charging back carriage on the birds exhibited at Newport, also that he does not intend in consequence to exhibit there; but I cannot wonder at it, as the railway charges are enormous, and, besides, I intend to follow his example. My present intention is not to exhibit any poultry next year, except where the unsold birds are to be returned free.—EDWARD PIGEON, *Lympstone, near Exeter.*

ARE ELDER-BERRIES INJURIOUS TO POULTRY ?

IN the Journal of September 26th there is an interesting article on "The Elder Tree," which concludes thus :—"Planted in lines as hedges the elder will be quite established in two years, and form a fence. . . . Such a wind-guard would be no small benefit to those who rear calves and poultry, and

if they made no use of the elder-berries the fowls would eat them greedily."

As I happen to be just fitting up a place in the country especially for the rearing of poultry, I at once determined, after reading the above, that I would have an elder fence. My wife cordially supported the motion, and, "on hospitable thoughts intent," indulged in pleasing visions of the time when she could regale her friends with the spice-warmed cup of home-made elderwine. Those delightful anticipations were of short duration, for, reading London's "Encyclopedia of Gardening," I found, at page 935, the following remark:—"The elder flowers are reported to be fatal to Turkeys, and the berries to poultry in general." Now, "Who shall decide when doctors disagree?" Can you adduce any evidence on either side of this vexed question? An ounce of experience is worth a pound of theory. There are, doubtless, hundreds of farmsteads where the "bourne bush" grows in abundance, and to which the fowls have free access, and I should like to ask some of your readers, who can speak from actual observation, whether the flowers and berries of the elder tree are really injurious to poultry?—W. STONEHOUSE, *Whitby*.

[We can testify that the berries are not fatal to fowls, for we formerly had a poultry-yard with numerous elder trees around it. The ripe berries fell in large numbers into the yard, but the fowls were never poisoned by them. It was as successful a yard as we ever possessed.—EWS.]

BRISTOL AND CLIFTON POULTRY SHOW.

At the early part of 1867, the Bristol and Clifton Show was held in weather dangerous alike to biped and quadruped. I am afraid that frost and snow told a sorry tale for its chancellor of the exchequer. The early part of November might have been considered proof against very severe weather; but as I started from home at 5.30 a.m., on the 6th, with a five-mile ride before me to catch the early train, the clear starlit sky above, the crisp and anything but green herbage under foot, I could not help thinking that Bristol people delighted in frosty weather. The day, however, proved remarkably beautiful for foggy November; "Poultry and Pigeons open this day," on all sides meeting the eye of many who care nothing for cocks and hens, and who marvel at the excitement manifested by those affected by the "mania." Yet, I apprehend, very few even of utilitarian fanciers could enter the Show and not admire the size of birds that were not even "in their teens," for, with the exception of the Bantams, the Show was confined to 1867 produce. As I looked at many of the pens, I could not help meditating on the wisdom of Mr. Hewitt's remarks in a late number, as to chicken classes, for many of these birds would have been taken for adults by an unpractised eye, whilst some few by keen thoroughly practised men were recognised as such!

The Rifle Drill Hall as a place of exhibition may hold its own with any other building. Floods of light equally thrown over the contents, lofty, well-ventilated, it can scarcely be improved. I thought the birds too well cared for as to food, and that too hard to please me, but I did not notice any green food in the pens; this would have been a boon. But to the birds themselves.

"Lightly tread, 'tis hallowed ground."

I waver at the threshold. Whose nose, *alias* beak, must I put out? so let me crave pardon first. I write as I have said before, simply my own impressions without any bias, and without any wish to injure bird or owner.

Class I. *Dorking*, cockerel and pullet, had a large entry and contained some wonderful birds; notably, Mrs. Arkwright's first-prize cap birds, they were marked six months and were said to weigh 18 lbs. They deserved their position. Not a few, probably, will think that it might have been better, and that they might have been considered the best pen in the Show. Well, I should be one of these. They were most beautiful birds, and if really only six months old marvellous specimens, for so far as I could judge them, there was the framework of grand size without extra fat. Their condition, too, was first-rate. The second-prize pen I did not like, the cock was a fine bird, but quite sooty in colour, he might have roosted the previous night up a chimney; his companion had an air of antiquity about her in the feet and jaw which was not becoming. The third-prize birds were rose-combed, and not equal in my judgment to several of the other competing specimens. The class was a very good collection, markedly contrasting with the White, where the first and third prizes were withheld, and the second-prize cockerel had no tail and was small. The single cockerels were beautiful, especially the first-prize bird of Dr. Campbell's. The decision for the best cockerel must have wavered over this pen. Lastly, the pullets I thought specially good; very, very large; but the fashionable colour in the eyes of the Judges is not that which takes my fancy. Until Bristol, I had believed that a good Dorking, like a good horse, could never be of a bad colour; but it would seem that the fancy is tending to dark hues, setting aside the beautiful old grey colour. I thought that in many of the birds, both cockerels and pullets, there was a greater tendency to a meeting of

the hocks than I should prefer. I apprehend that this is caused by the marvellous rapidity of growth.

Cochins were not so numerous as I expected, and by some error I wholly missed the white birds. There was a most splendid pullet in pen 88 (Duke of Newcastle's), but the companion bird was not equal to her. The first-prize cockerel in the Buffs did not carry his secondaries well, and his tail spread open. The Brown and Partridge class carried off the Cochins cap. As far as regards size, these birds left nothing to be desired; but the pullet appeared to have lost her tail, and what was left of it was dreadfully one-sided. This appeared to me and to several other persons, who know more of Cochins than I do, one of the mistakes that will happen. Strangely enough No. 2 had the same tendency, but by no means so developed. The first-prize single cock was "in the same line," perversely so. One of the Judges told me they were over this pen for a quarter of an hour, and he would look them in the face and put his tail straight. He seemed to do as he liked with it, but preferred to carry it on one side; the bird was otherwise leggy to my eye. The pullets were beautiful. One pen, the best, lost their chance from both tails having disappeared; the first-prize pen proved on these closely. Had the Cochins cap been open to the pullets, these two pairs would have satisfied me for that honour. The Cochins generally were splendidly feathered. Many had well-covered hocks, projecting freely, and I was delighted to see in these, as in Brahmas, less fear of vulture hocks.

Game contained the pen of the Show. To Mr. Fletcher's first-prize Black Reds was awarded Mr. Lang's beautiful cap. Faultless in condition, as Mr. Fletcher's birds always are. The cock was very beautiful; but he failed to carry his wings as closely as I fancied was necessary; the hen appeared very dark in colour. They may have looked better on the day of judging, but for the post of best pen in the Show they did not take my fancy as much as the Spanish or Dorking cap pens. In the third-prize pen the pullet's comb had a decided twist. The first-prize Duckwing cock had a beautiful carriage. He was all over a Game cock, and would have enjoyed a set-to with any other bird just for the pleasure of the thing. The second-prize single cockerel was a very large bird, and I should fancy will be too large before long. In this class an old bird was disqualified, that somehow was entered in error. In the pullet class several were very dark, almost black, and one commanded bird had a terribly twisted comb.

In January the class *par excellence* was the *Spanish*, and at Bristol, where they are the rage, we should expect them still to be. Generally I thought their condition very inferior to the January collection. Many of them were in moult, and tails were suffering in many of the pens. Not a few, though young birds, had faces that promised blindness very shortly. The face had a puckered wrinkled appearance; not the beautiful kid-glove face, which is such an ornament. The early blindness will, I expect, become a serious matter; and if it increases at the rate it has done during the last few years Spanish will have to be shown in the egg! The cap birds were very deserving the honour bestowed on them, and it is, indeed, a grand success that Mr. Parsley achieved—first and second in two classes, silver cap for best pen of Spanish, and the honour of having run the winning birds very closely for the champion cap. The first-prize pair of pullets was in splendid condition, the gloss on the plumage was magnificent; and, priced at only £5 5s., it need scarcely be added that the birds changed hands immediately.

In *Brahmas* all the first prizes and the silver cup, as a matter of course, went to the Sister Isle. All Mr. Boyle's birds were in beautiful condition; they were heavily feathered. The cockerel in the Brahma cap pen was a very large bird. He has had several victories, and his comb rather indicated the need of rest. The birds in the prize pen of Mr. Hargreaves were magnificently feathered, and his highly-commended pen decidedly "hokey." I was very glad to see it; there are far worse features in Brahmas or Cochins than vulture hocks. Mrs. Hart's highly-commended pullet in this class had a string tied round the leg, which ought, in my humble opinion, to disqualify. The Light birds mustered very creditably as to numbers. The first-prize cock was very good, and the feathering in several pens decidedly improved. The general feathering of this class was inferior as compared to the Dark. In one or two pens there were single-combed specimens, coupled in one case with three-inch hock feathers. The single comb cannot be tolerated in Brahmas now, whatever it might have been in years gone by, when at Hereford, the Judge disqualified two of my pens because they were pea-combed!

The Cockerel class. Ayo, to be sure, let me pause and reflect; honour, so unheard of, so unexpected! The silver cup for the best cockerel in the Show was awarded to Brahmas! Cock-a-doodle-o-o-o! The despised and degraded mongrel, that has step by step, through evil report proved its sterling value and made itself a position amongst our domestic poultry it is never likely to lose again, achieved this unprecedented feat. All honour to Mr. Boyle. In colour, markings, form, and condition, a more beautiful bird has rarely been seen. Mr. Wragg told me it was his first appearance in public, and he has certainly made a very good beginning. I am so pleased at the result, that I shall show my partiality this time and not pick a feather out of him, though I should have liked to alter one part of the bird. Mr. Boyle's pullets were also very beautiful.

The Spangled *Haverburghs* beat the Pencilled, the cap going to a pen of Gold-spangled belonging to Mr. Hyde, and which were entered at £6 6s., and immediately bought in; and for some hours before the

posting of the "sold" label on the pen, not a few intending purchasers were *sold* who went to claim them. I thought many of the noticed Silver-spangled pens had very stained ear-lobes. Black Hamburgs had three prizes offered them, and four pens appeared. Now, I cannot but think, that if the poor Malays had been as kindly invited, they would have responded quite as well, if not better.

Polish (any variety).—nine entries. I foretold a diminution as compared with the splendid collection of this variety that appeared in January, when almost every pen was honoured by the Judges; the falling off, however, was not only in numbers but in quality. The first-prize White-crested Blacks had small top-knots, and the pullet's was much too loose. The second-prize Silver of Mr. Beldon's had first-rate top-knots, the pullet's wonderfully large, and many of the feathers most beautifully laced, but unfortunately she had a crooked back. Mr. Taylor's commended pen contained a beautiful pullet, but the crest feathers were twisted about in all manner of directions. There was only a single pen of Gold, and those very indifferent. The Silvers numbered six out of the nine pens, and if the Bristol Committee will not give separate classes for the three varieties, let them at least give Silvers a class, and add another for "Any other variety of Polands." There are no frequenters of shows, I am certain, who wish these birds to go out, but they must do so unless they are more noticed.

I hurried by the *French* fowls, yet I was there long enough to see a mistake which in any other class, and a fancy price on one pen and a selling price on another, might have given some trouble. Col. Stuart Wortley's 448 pen contained Crève Cœur; according to the catalogue they should have been La Flèche. Evidently the labels had been placed on the wrong hampers.

Black Cochins were first in *Any other Variety*, and were more black than usual. The third-prize Sultans had barely any crests. A pen of Mr. Cooper's, wrongly entered in Class 37, was good, but if I recollect right it contained old birds.

Bantams mustered very strongly, and the cup went to some Pekin Bantams. A great error was committed in this class. The third-prize pen contained a very pretty rose-combed cock and a single-combed hen; moreover, the legs of the gentleman were white, and the lady's light olive, I think, but any way they were "not of the same pattern."

The *Ducks* were as large as Geese used to be. This especially applies to the Aylesburys. The *Geese* were a most wonderful class and a good entry; they deserved an extra prize. The Judges said the *Turkeys* were not so heavy in proportion, but all had honours.

I must leave the *Pigeons* to an abler pen. I saw "our Chaplain" taking notes, and he knows what a Pigeon ought to be. They were very beautiful, and quite an addition to the Show.

I have now run through the classes perhaps in too prolix a manner. I give the ideas that forced themselves on my mind, they may interest some of your readers. Before I close my remarks, I venture to offer a suggestion on the matter of Judges. I apprehend that most persons will agree that some of the decisions were wrong, one or two glaringly so. The third-prize White Bantams, the cup Cochins, the second-prize Dorkings in Class I, according to the opinion of many good judges, as to the age of the hen; and the first-prize Dorking pullets, I was told by a Dorking breeder on whose judgment I can rely, included a pullet with the fifth toe very imperfectly developed. Is it not possible, as the awards are handed in, for a third person to examine the pens critically with the intention of discovering faults? By this means, probably, such defects as non-matching of legs and combs, and twisted tails, which are a positive deformity, would not so easily escape detection, and the Judges could then reconsider their verdict. This would be better than letting the public discuss awards, often in no measured terms. Judging is no office to be coveted, but with some such arrangement fresh eyes might be induced to test their skill.

I tender my best thanks to the Committee for their trouble in thus bringing together so beautiful a collection of our feathered pets. I trust another year they will adopt greater liberality to the Polands, and indulge Malays with a class. One of the great beauties of a show is the variety of breeds. Gloucester must look out, and the Bristol Committee will need "both eyes open," with such a rival as the Somerset County Association promises to be; already in several points its schedule is in advance of Bristol; but as I hope soon to review it in these columns, I will only add, I trust the influx of visitors gave the Bristol and Clifton Show an overflowing treasury.—Y. B. A. Z.

YOUNG BIRDS.

DORKINGS (Coloured).—First and Cup, Mrs. Arkwright, Etwell Hall, Dorby. Second, Hon. W. Fitzwilliam, Wentworth Woodhouse Rotherham. Third, E. Shaw, Plas Wilnot, Oswestry, Salop (Grey). Highly Commended, L. C. Campbell, M.D., Brentwood; Duke of Newcastle, Clumber Park, Notts; J. Fox, St. Bees, Cumberland. Commended, Rev. A. Thynne, Penslowe Stratton, Cornwall; Hon. W. H. Fitzwilliam; Rev. G. Hustler, Stillington Vicarage, York.

DORKINGS (White).—First and Third Withheld. Second, Mrs. Dale, Scarborough.

DORKINGS (Any variety).—*Cockerel*.—First, D. C. Campbell, M.D. Second, Mrs. Arkwright (Coloured). Third, J. Clift, Dorking (Coloured). Highly Commended, Mrs. Bailey, Shooters Hill, near Longton (Coloured); Rev. A. Thynne (Coloured). Commended, Hon. W. H. Fitzwilliam; F. Parlett, Great Baddow, near Chelmsford (Coloured).

DORKINGS (Any variety).—*Pullets*.—First, Hon. W. H. Fitzwilliam. Second, Mrs. Arkwright (Coloured). Third, L. Patton, Comestrowe House, Taunton (Coloured). Highly Commended, Rev. A. Thynne (Coloured);

Duke of Newcastle; F. Lucas, Stapleton. Commended, J. Pinckney, Great Durnford (Coloured).

COCHIN CHINA (Cinnamon and Buff).—First and Second, W. A. Taylor, Manchester (Buff). Third, J. Cattell, Birmingham (Buff). Highly Commended, A. H. H. Latty, Shrewley, near Warwick (Buff); H. Tomlinson, Moseley, near Birmingham (Buff). Commended, Mrs. Christie, Glydebourne, near Lewes, Sussex (Buff); Hon. Miss Douglas Pennant, Penhyryn Castle, Bangor (Buff); T. Foster, Penrhy Cren, Sutton, Lancashire (Buff).

COCHIN CHINA (Brown and Partridge).—Cup, First, and Third, E. Tudman, Ashgrove, Whitechurch, Salop (Partridge). Second, J. R. Rodbard, Aldwick Court, Wroughton, near Bristol (Partridge). Commended, E. Tudman (Partridge).

COCHIN-CHINA (White).—First, Mrs. Ford, Hardengreen, Dalkeith. Second and Third, G. Lamb, Compton, near Wolverhampton. Highly Commended, A. O. Worthington, Burton-on-Trent. Commended, Col. J. A. Ewart, Tatenhill, Burton-on-Trent; Col. Stuart Wortley, Grove End Road, London; J. H. Wilson, St. Bees, Cumberland.

COCHIN-CHINA (Any variety).—*Cockerel*.—First, G. A. Crews. Second, W. A. Taylor. Third, E. Tudman. Highly Commended, W. A. Taylor. Commended, J. Cattell (Buff). *Pullets*.—First, C. Sidgwick, Ryddlesden Hall, Keighley. Second, R. Chase, Balsall Heath, Birmingham (White). Highly Commended, A. O. Worthington (White); Hon. Mrs. Sogden, Wells, Somerset (Buff); J. Gardiner, Bristol (White); J. H. Dawes, Moseley Hall, Birmingham (Buff); H. Mapplebeck, Woodfield, Moseley, near Birmingham (Buff); J. R. Rodbard (Partridge). Commended, A. H. H. Latty (Buff).

GAME (Black-breasted and other Reds).—Cup and First, J. Fletcher, Stoneclogh, near Manchester (Black Reds). Second, Rev. T. O'Grady, Hognaston Vicarage, near Ashbourne, Derbyshire (Black Red). Third, C. Chaloner, Whitwell, Chesterfield. Highly Commended, G. W. Cooper, Chester (Black Red); C. Chaloner; T. Burgess, Burleydam, Whitechurch, Salop; J. Fletcher. Commended, W. Roberts, Brierfield, near Burnley, Lancashire (Brown Red); Duke of Newcastle; T. Burgess.

GAME (Duckwings, and other Greys and Blues).—First, W. Boyes, Beverley (Duckwing). Second, Rev. T. O'Grady (Duckwing). Third, W. Butt, Ashley Down, Horfield, Bristol (Duckwing Greys). Commended, Messrs. Church & Houlding, Nantwich (Duckwing).

GAME (Any other variety).—First, J. Fletcher (Piles). Second, F. Watson, Messing Hill, Kelvedon, Essex (Piles). Third, Miss Crawford, Southwell, Notts.

GAME (Any variety).—*Cockerel*.—First and Third, C. Chaloner. Second, J. Fletcher (Black Red). Highly Commended, T. Burgess. Commended, J. Fletcher (Black Red); F. Watson (Brown Red). *Pullet*.—First, E. Aykroyd, Bradford. Second, J. Brough, Carlisle. Third, J. Fletcher. Highly Commended, W. H. Stagg, Netheravon, Pewsey, Wilts (Black Red); H. Beldon, Goststock, Bingley; F. Watson (Black Red); G. R. Smith, Scarborough. Commended, J. Jackson, Bury, Lancashire; C. Chaloner; C. Edwards, Wroughton, near Bristol (Black Red).

SPANISH.—Cup, First and Second, D. Parsley, Kingsdown, Bristol. Third, J. Newton, Leeds. Highly Commended, H. Lane, Bristol; T. Bamfield, Brandon Hill, Clifton; G. Lamb, Compton, near Wolverhampton; A. Heath, Calne, Wilts. Commended, M. Farrand, Dalton, near Huddersfield. *Cockerel*.—First and Second, D. Parsley. Third, H. Lane. Highly Commended, H. Lane; A. Jones, Stapleton, near Bristol; A. Heath. Commended, J. Barry; T. Bamfield. *Pullets*.—First, A. Heath. Second, E. Jones, Clifton. Third, H. Lane. Highly Commended, J. Newton; T. Bamfield.

BRAHMAS (Dark).—Cup and First, R. W. Boyle, Bray, Co. Wicklow. Second, W. Hargreaves, Bacup. Third, H. Lacy, Hebden Bridge. Highly Commended, K. Jopp, Aberdeen; Mrs. Hurt; W. Hargreaves; Commended, J. K. Fowler, Prebendal Farm, Aylesbury; E. Pigeon, Lymington, Devon.

BRAHMAS (Light).—First, A. Herbert, Egham, Surrey. Second, H. M. Maynard, Holmewood, Isle of Wight. Third, H. Lacy. Highly Commended, A. Herbert. Commended, J. Pares, Postford, near Guildford; H. M. Maynard; W. Whiteley.

BRAHMAS (Any variety).—*Cockerel*.—Cup for best Cockerel of any variety, and First, R. W. Boyle. Second, Mrs. Hurt (Dark). Third, H. Lacy. Highly Commended, Hon. Miss Douglas Pennant (Dark). Commended, J. H. Reed, Calstock, near Tavistock (Dark); H. Beldon; M. Scott, Cote Idle, near Leeds. *Pullets*.—First, R. W. Boyle (Dark). Second, Mrs. Hurt (Dark). Highly Commended, J. K. Fowler. Commended, Mrs. J. Godwin, Langford, near Bristol (Light).

HAMBURGHS (Golden-pencilled).—First, F. Pittis, jun., Newport, Isle of Wight. Second, H. Pickles, jun., Earby, Skipton. Third, T. Wrigley, jun., Tonge, Middleton, near Manchester.

HAMBURGHS (Golden-spangled).—Cup, First and Third, W. A. Hyde, Hurst, Ashton-under-Lyne. Second, N. Marlor, Denton, near Manchester. Commended, Rev. W. S. Shaw, Bath; J. Chadderton, Hollinwood, near Manchester; I. Davies, Harborne, near Birmingham.

HAMBURGHS (Silver-pencilled).—First, J. E. Powers, Biggleswade, Beds. Second, F. Pittis, jun. Third, Rev. T. O'Grady. Commended, Rev. T. O'Grady.

HAMBURGHS (Silver-spangled).—First, H. Beldon. Second, T. Fawcett, Northgate, Baildon, near Leeds. Third, J. Fielding. Highly Commended, J. Fielding; W. E. George, Dowmede, Stoke Bishop, near Bristol; Ashton & Booth. Commended, B. S. Stock, Congresbury; J. Walker, Kearesborough.

HAMBURGHS (Black).—First and Third, T. Wrigley, jun. Second, C. Sidgwick.

HAMBURGHS (Any variety).—*Cockerel*.—First, F. D. Mort, Stafford. Second, H. Beldon. Third, F. Pittis, jun. Highly Commended, W. A. Hyde (Gold-spangled).

POLISH (Any variety).—First, P. Unsworth, Newton-le-Willows, Lancashire. Second, H. Beldon. Third, D. Mutton, Brighton (White-crested). Commended, W. A. Taylor.

FRENCH FOWLS (Any variety).—First, Hon. W. H. Fitzwilliam (La Flèche). Second, Col. Stuart Wortley (La Flèche). Third, H. M. Maynard. Highly Commended, Col. Stuart Wortley (Houdans); H. M. Maynard. Commended, J. K. Fowler.

ANY OTHER DISTINCT VARIETY.—First, H. J. Godfrey, Hammersmith, London (Black Shanghai). Second, Col. Stuart Wortley (Japanese). Third, Mrs. E. E. Llewellyn, Bridgend, Glamorganshire (White Sultans). Commended, J. Lugg, Montpellier, Bristol (Mincoras).

ANY AGE.

GAME BANTAMS (Black-breasted and other Reds).—First, H. Shumach,

Southwell, Notts. Second, J. W. Kelleway, Isle of Wight (Black Red) Third, J. J. Cousins, Chapel Allerton, near Leeds (Black Red). Highly Commended, W. Mabon, Jedburgh (Black Red); J. Crosland, jun., Wakefield. Commended, J. W. Morris, Rochdale (Black Red).

GAME BANTAMS (Any other variety).—First and Second, H. Shumach. Third, J. Crosland, jun. (Duckwing). Commended, T. H. Wyndham, Salisbury.

BANTAMS (Gold and Silver Seabrights).—First and Third, Rev. G. S. Crowsy, Tiverton (Gold and Silver-laced). Second, M. Leno, Dunstable, Beds (Gold-laced). Commended, M. Leno (Gold and Silver-laced).

BANTAMS (Black, Clean-legged).—First and Second, H. Draycott, Humberstone, near Leicester. Third, E. Cambridge, Bristol. Commended, T. C. Harrison; J. R. Jessop; T. Davies, Newport, Mon.; Rev. F. Tearle.

BANTAMS (White and any other variety).—Cup and First, W. J. Cope, Barnesby (Pekin). Second, T. Burgess (Japanese). Third, Mrs. Dale (White).

BANTAMS (Any variety of Game).—Cock.—First, Rev. A. K. Cornwall, Bencombe (Black Red). Second, H. Shumach. Highly Commended, Messrs. Ward & Littlewood, Low Pavement, Chesterfield (Black Red); Miss Crawford. Commended, J. M. Tolley, Worcester (Black Red); J. D. Newsome, Batley, Yorkshire (Black Red).

BANTAMS (Any other variety).—Cock.—First, W. J. Cope (Pekin). Second, E. Pigeon (Japanese). Highly Commended, T. Burgess (Pekin).

DUCKLINGS (White Aylesbury).—First and Second, Mrs. M. Seamons, Hartwell, Aylesbury. Highly Commended, E. Lecch, Rochdale; J. K. Fowler. Commended, Rev. G. Huster.

DUCKLINGS (Rouen).—First, J. K. Fowler. Second, E. Lecch.

DUCKLINGS (Any other variety).—First, Mrs. M. A. Hayne, Fordington, Dorchester (Black East Indian). Second, T. C. Harrison, Hull. Highly Commended, Mrs. J. Clarke, Bedford (White Peruvian); Mrs. M. A. Hayne (Black East Indian).

GOLINS.—First, J. K. Fowler. Second, Mrs. M. Seamons. Highly Commended, W. Wykes, Hineckey, Leicestershire; L. Patton (White); S. H. Stott; Rev. G. Huster; Zoological Society, Clifton (Egyptian, Canadian); J. C. Cooper (Toulouse).

TURKEYS (Any variety).—Poult.—First, E. Lecch. Second, Miss J. Milward, Newton-St-Lee. Highly Commended, S. H. Stott. Commended, W. Wykes; Lady L. Charteris (French).

PIGEONS.

CARRIERS (Any colour).—Cup and First, F. Crossley, Eland, near Halifax, (Black). Second, F. T. Wiltshire, West Croydon Surrey. Highly Commended, M. Hedley, Claremont, Red Hill, Surrey. Commended, F. Crossley (Black); F. T. Wiltshire; R. Fulton, Deptford, London; F. Else, Westbourne Grove, Bayswater; G. S. Hockey, Durham Down, Bristol.

POUTRENS (Any colour).—First, A. H. Stewart, Harborne, near Birmingham. Second, F. Crossley (Blue). Commended, J. R. Harvey, M.D. St. Patrick's Place, Cork (White); R. Fulton; C. Bulpin, Riverside, Bridge-water; A. Heath (White).

TUMBLERS (Almond).—First, F. S. Wiltshire. Second, F. Key, Beverley, Yorkshire. Highly Commended, F. S. Wiltshire. Commended R. Fulton. **TUMBLERS** (Any variety except Almonds).—First, A. H. Stewart. Second, C. Bulpin.

RUNTS.—First and Second, T. D. Green, Safron Walden.

JACOBINS (Any colour).—First, F. Else. Second, J. Glasser, Quarry Hill Terrace, Rochdale (Yellow). Commended, J. Thompson, Bingley, Yorkshire.

FANTAILS (Any colour).—First, H. Beldon. Second, H. Yardley, Market Hall, Birmingham. Highly Commended, J. E. Breward, High Street, Coventry (Blue); H. Yardley; F. Else. Commended, J. E. Breward (White); H. M. Maynard (White).

TUMBLERS (Any colour).—First, C. Bulpin. Second, H. Beldon. Highly Commended, J. Bailly, jun., Mount Street, London. Commended, F. Waitt, Sparkbrook, Birmingham.

OWLS (Any colour).—Cup and First, J. Fielding, Lark Mill House, Rochdale. Second, F. Crossley. Very Highly Commended, F. Crossley. Commended, J. Bailly, jun.

NUNS.—First and Second, C. Bulpin. Highly Commended, H. Beldon. **TURNTS** (Any colour).—First, J. Thompson. Second, C. Bulpin. Highly Commended, H. Yardley. Commended, H. Beldon.

BARNS (Any colour).—First, M. Hedley. Second, F. Crossley. Highly Commended, Messrs. Maclure & Redford, Knob Hall, Nowhall Green, Timperley, Cheshire; M. Hedley. Commended, Messrs. Maclure & Redford.

DRAGONS (Any colour).—First, C. Bulpin. Second, F. Crossley. Highly Commended, E. Pigeon, Lymington, Devon. Commended, H. Yardley.

ANY OTHER DISTINCT VARIETY.—First, W. S. Loder, Bath (Frillbacks). Second, J. E. Breward (Archangels). Highly Commended, H. Yardley; J. Bailly, jun. (Archangel). Commended, H. Beldon (Swallows); J. Bailly, jun., (Brunner Pouter); H. Yardley.

JUGES.—Poultry: E. Hewitt, Esq., Sparkbrook, Birmingham; and the Rev. G. F. Hodson, North Petherton. **Pigeons**: Dr. Cottle, of Cheltenham.

PREVENTING A PIGEON'S FLIGHT.

"WILTSHIRE RECTOR," in his remarks on faucy Pigeons, recommends pulling the flight feathers. This puts the bird in much pain, and is quite unnecessary. I always take a piece of wet soap, and rub down four or five of the first flight feathers in each wing, and I find it answers quite as well.

When birds are running for egg is the safest time to turn them out—the hen first, and the cock afterwards; he will not be long before he drives her in again.—TRUMPETER.

LADY HOLMESDALE'S POULTRY.—We have a catalogue of the sale of this excellent collection, of which these words of the auctioneer are no exaggerated statement:—"The Right Hon. Viscountess Holmesdale's name has figured in the prize-lists

of London, Birmingham, Manchester, Darlington, Bristol, Aberdeen, Perth, Salisbury, Ipswich, Dorking, Bradford, Brighton, Beverley, Maidstone, Hereford, Newport, Hastings, Stafford, and many other noted Shows, and the auctioneer feels no hesitation in saying that neither trouble nor expense has been spared by her ladyship in procuring the choicest and best breeds that England ever produced." There are 111 lots of Dorkings, 34 lots of Spanish, and about 30 lots various. The advertisement states the time of the sale and other particulars.

HAMPSHIRE ORNITHOLOGICAL ASSOCIATION.

THE seventh annual exhibition of Poultry, Pigeons, Pheasants, and Cage Birds commenced at Southampton on the 12th inst., and will close to-day. The entries were very numerous, and as will be perceived by the numerous awards made by the Judges, of great general excellence. Subjoined is the prize list, but we must defer remarks on the classes till next week.

SPANISH.—First, J. R. Rodbard. Second, R. Fulton. Highly Commended, F. James; R. Ede. Commended, R. Wright.

DORKINGS.—First, D. Heather. Second, T. P. Edwards. Highly Commended, T. P. Edwards; W. H. Walker; W. Peacock; J. G. C. Stevens. Commended, R. J. Wright; D. Heather.

COCHIN (Any variety).—First and Cup, J. R. Rodbard. Second, Mrs. Christie. Highly Commended, W. W. Pyne; Col. Stuart Wortley. Commended, P. Crowley; R. J. Wright; H. Lee; H. Pigeon; J. C. Phair; F. W. Rust.

BRAHMAS (Dark).—First, F. James. Second, J. H. Cuff. Highly Commended, F. James; C. G. W. Macpherson; Rev. J. De L. Simmonds. Commended, E. Pigeon; Rev. J. Ellis; Rev. R. Parker; E. Pike.

BRAHMAS (Light).—First and Cup, Miss Harvey. Second, P. Crowley. Highly Commended, P. Crowley; J. Pares; F. Crook; H. M. Maynard. Commended, P. Crowley; J. Pares.

GAME (Black-breasted).—First, W. W. Pyne. Second, S. Matthews. Commended, H. H. Thompson.

GAME (Brown Reds).—First, S. Matthews. Second, J. Eken. Commended, W. W. Pyne.

GAME (Other variety).—First, W. W. Pyne (Duckwing). Second, S. Matthews (Duckwing).

HAMBURGERS (Silver and Gold-pencilled).—First and Second, F. Pittis, jun. Commended, T. J. Saltmarsh (Silver); W. Tippler (Silver).

HAMBOURGERS (Silver and Gold-spangled).—First, Messrs. S. & R. Ashton (Gold). Second, H. Lee. Highly Commended, Mrs. Pettit (Silver); H. Lee.

POLANDS (Any variety).—First, T. P. Edwards (Various). Second, Mrs. Pettit (Gold). Highly Commended, J. Powney (Silver); T. P. Edwards. Commended, D. Mutton (White-crested); Mrs. Pettit (Gold).

ANY OTHER DISTINCT VARIETY, INCLUDING FRENCH.—First and Third, R. J. Wright (La Flèche, Hondans). Second, Col. Stuart Wortley (French). Highly Commended, H. Arnold (Crève Cour); Rev. N. J. Ridley (La Flèche); H. M. Maynard (Hondans); J. C. Phair (Blue Andalusians). Commended, J. Lichfield (Sultans); J. C. Phair (Blue Andalusians).

GAME BANTAMS.—First and Second, J. W. Kelleway. Highly Commended, T. Dyson; T. Penfold; O. Nicholson (Duckwings). Commended, W. F. Entwistle; W. Boucher (Black-breasted); T. G. Rognhart (Pile Game); H. Sherry; T. Penfold; O. Nicholson (Pile); H. W. Kelson (Pile).

BANTAMS (Any variety).—First, Messrs. T. & R. Ashton. Second, E. Pigeon (Japanese). Highly Commended, Messrs. Tonkin & Tuckey (Black); C. T. Harrison; S. A. Wyllie (Japan). Commended, Mrs. Morant (Gold Seabright).

DUCKS (Aylesbury).—First, W. Tippler. Second, F. Pittis, jun. Highly Commended, F. Pittis, jun.; S. Ayles.

DUCKS (Any variety).—First and Second, S. A. Wyllie (Carolina and Mandarin). Highly Commended, H. Dowsett (Rouen); T. R. Hulbert (Rouen); Mrs. Morant (White Peruvian). Commended, T. R. Hulbert (Rouen); H. Arnold (Indian); T. C. Harrison; E. Pigeon (Rouen).

GRESE.—First and Second, Lady M. Macdonald (Toulouse).

TURKEYS.—First, St. J. Coventry. Second, Lady M. Macdonald. Highly Commended, J. Smith; Lady M. Macdonald; Mrs. H. Wilkins.

PHEASANTS (Gold and Silver).—First and Second, Mrs. E. Harrison (Gold and Silver).

PHEASANTS (Any other variety).—First, Second, Very Highly Commended, and Highly Commended, J. W. Fleming (Chinese Ring-neck and Common).

EXTRA STOCK.—Commended, P. Crowley (Light Brahma); Mrs. S. Ayles (Bantams); Rev. R. Parker; Pens, No. 619, 623, 631, 632.

PIGEONS.

POUTERS OR CROPPERS.—First, R. Fulton. Second, J. Lufkin. Highly Commended, J. H. Evans; H. Yardley. Commended, R. Fulton.

TUMBLERS.—First and Second, R. Fulton. Highly Commended, J. Ford; H. Yardley. Commended, J. D. Blackman; F. Waitt.

BARNS.—First, Mrs. W. Massey. Second, H. M. Maynard. Highly Commended, R. Fulton; H. Yardley; F. Waitt (Yellow).

JACOBINS.—First, H. M. Maynard. Second, R. Fulton. Highly Commended, Mrs. W. Massey; H. M. Maynard; F. Waitt.

FANTAILS.—First, H. M. Maynard. Second, H. Yardley. Highly Commended, W. Makepeace; E. Pigeon; H. M. Maynard; F. Else.

OWLS.—First, J. Fielding, jun. Second, St. J. Coventry. Highly Commended, J. Fielding, jun.

TURNTS.—First, J. Fielding. Second, F. Else. Highly Commended, J. Bell; W. Yardley.

CARRIERS.—First and Second, S. Harding. Highly Commended, J. C. Ord; R. Fulton; S. Harding; H. Yardley. Commended, J. Lufkin (Black); H. Yardley.

NUNS.—First, F. H. Middleton. Second, F. Else. Highly Commended, H. Yardley.

ANY OTHER DISTINCT VARIETY.—First, S. A. Wyllie. Second, F. Pittis, jun. (Black Magpies). Third, F. Waitt. Highly Commended, F. Pittis, jun. (Magpies); E. Fane; S. A. Wyllie; H. M. Maynard (Siberian); E. Pigeon, jun. (White Trumpeters); W. Squire (Silver Beards); H. Yardley;

F. Waitt. Commended, A. P. Maurice (Black Trumpeters); F. Pitts, jun. (Swiss); E. Pigeon (Dragons).

CANARIES.

NORWICH (Clear and Yellow).—First and Third, W. Walter. Second, E. Orme. Very Highly Commended, E. Orme. Highly Commended, E. Orme; O. Nicholson; J. Judd. Commended, G. Tuckwood.

NORWICH (Clear Buff).—First, W. Walter. Second, E. Orme. Very Highly Commended, E. Orme; W. Walter. Highly Commended, G. Moore. Commended, G. Tuckwood; T. Elam.

NORWICH (Marked or Variegated Yellow).—First, W. Walter. Second, E. Orme. Very Highly Commended, E. Orme. Highly Commended, W. Walter. Commended, J. Preen; G. Tuckwood.

NORWICH (Marked or Variegated Buff).—First, E. Orme. Second and Third, W. Walter.

BELGIAN (Clear Yellow).—First and Second, O. Nicholson. Very Highly Commended, G. Tuckwood. Highly Commended, J. Baxter; E. Orme.

BELGIAN (Clear Buff).—First, O. Nicholson. Second, G. Tuckwood. Very Highly Commended, E. Orme. Highly Commended, R. J. Troske. Commended, E. Orme.

BELGIAN (Variegated or Marked Yellow).—First, E. Orme. Second, C. Moorshead. Commended, W. Inson.

BELGIAN (Variegated or Marked Buff).—First, G. Tuckwood. Second, O. Nicholson. Highly Commended, W. Inson.

LIZARD (Golden-spangled).—First, T. Fairbrass. Second, G. Tuckwood. Very Highly Commended, F. W. Fairbrass; E. Orme. Highly Commended, E. Orme; T. Fairbrass. Commended, G. Harrison; G. Harding.

LIZARD (Silver-spangled).—First, F. W. Fairbrass. Second, T. Fairbrass. Very Highly Commended, Tuckwood; W. D. Prosser. Highly Commended, E. Orme; G. Harding. Commended, E. Orme; T. Fairbrass.

MULE (Jonque Goldfinch).—First and Second, H. Ashton. Third, E. Orme. Very Highly Commended, G. Poole; E. Orme.

MULE (Mealy Goldfinch).—First, B. Poynton. Second, E. Orme. Very Highly Commended, E. Orme; B. Poynton. Highly Commended, H. Ashton. Commended, G. Poole; G. Moore.

LINNET MULE.—First, J. Baxter. Second, H. Ashton.

ANY OTHER VARIETY OF CANARY OR MULE.—First, T. Mann (London Fancy). Equal Second, J. Wynn (Crested Norwich); W. Walter (Bullfinch and Goldfinch Mule). Equal Third, J. Wynn (Jonque Cinnamon); J. Judd (Norwich Crested). Very Highly Commended, G. Goulter; B. Boynton. Highly Commended, J. Judd (German Crested).

BRITISH BIRDS.

BULLFINCH.—Prize, H. Kelson. Very Highly Commended, H. Brown-ing. Highly Commended, G. Cluett.

GOLDFINCH.—Prize, G. Moore. Very Highly Commended, W. Haysom; R. D. Starkey. Highly Commended, G. Harding; J. Judd.

SKYLARK.—Prize, J. Judd. Highly Commended, W. H. Kelson.

WOODLARK.—Prize, R. Noyce. Highly Commended, W. Walter.

BLACKBIRD.—First, J. Titheridge. Second, T. Bourne (White). Very Highly Commended, J. Devonshire.

SONG THRUSH.—Prize, W. H. Martin.

STARLING.—First, J. Judd. Highly Commended, J. Early. Commended, W. Haysom.

SISKIN.—Prize, Master De La Simmonds.

ANY OTHER VARIETY.—First, H. Hanly (White Jackdaw). Second, equal to First, E. Hubbarde (Magpie). Third, W. Walter (Hoopoe). Fourth, equal to Third, — Stevens (Tame Partridge). Commended, R. D. Starkey (Robin).

FOREIGN BIRDS.

COCKATOO (Any variety).—First, J. Judd. Highly Commended, C. T. Bell (Rose-breasted).

PARROT (Any variety).—First, J. Judd (Grey). Highly Commended, J. Roso (Green); W. Davis (Grey).

LORIES (Any variety).—First, J. Judd (Grand Lory). Second, A. Walter (Pennant).

LOVE BIRDS.—First, J. Judd. Highly Commended, W. Walter.

PAROQUETS (Any variety).—First, W. Walter (Pair Redrumps). Second, Rev. J. P. Bartlett (Blossom-headed Cardinal). Third, G. Watts (Turon, from Australia). Very Highly Commended, J. Judd (Roschill and Australian Grass).

JAVA SPARROWS.—First, W. Walter. Highly Commended, J. Judd.

WIDAR BIRDS.—First, Mrs. E. Harrison. Very Highly Commended, J. Bailey.

CARDINALS.—Prize and Highly Commended, J. Bailey.

BISHOPS.—Prize, W. Walter. Very Highly Commended, J. Judd.

WAXBILLS (Any variety).—First and Second, J. Judd (Zebra and Orange-faced). Very Highly Commended, W. Walter.

ANY OTHER VARIETY.—First, J. Judd (Pintail Nonpareil). Second, W. Walter (Nonpareil). Third, C. T. Bell (Nonpareil). Very Highly Commended, W. Walter. Highly Commended, J. Bailey (Cinnamon Finches).

JUNGLES.—Poultry.—Edward Hewitt, Esq., Sparkbrook, Birmingham. Canaries.—A. Willmore, Esq., London. British and Foreign Birds and Pheasants.—William Goodwin, Esq., London.

BEE-KEEPING IN CHESHIRE.

I AM only a first-year's man in bee-keeping. My first hive I received last March; I drove a swarm on the last day in May, hived the bees in a ten frame Woodbury hive, and furnished them with combs from a straw hive that was deserted in spring from being queenless. The second swarm came off sixteen days afterwards, at 9 a.m. I placed a super on the first swarm, and took 11 lbs. of comb and honey off, and a bell-glass off the old stock with 3 lbs. The weight of the old stock in the straw hive is now 45 lbs. gross; the first swarm 25 lbs. nett; the second I have fed a little.

The heaviest cottage hive I have heard of this season was

20 lbs. nett. There are no frame hives here, except two that Mr. Cotton sent down from London.—J. R. Frodsham.

P.S.—I should feel greatly obliged if Mr. George Fox would give us a description of his adjusting super, with which he took a large supply in 1863.

BLACK QUEEN AND LIGURIAN DRONE BEES.

DOES a cross of the above description cause the black queen to become as prolific as when a Ligurian queen mates with a black drone? And what is the effect on the young bees so bred as far as regards the markings on their bodies?—C. A. J.

[A portion of the young bees are more or less distinctly marked Ligurians, whilst the remainder are common bees. We should doubt whether this cross influences the fecundity of the queen.]

AWARDING PRIZES FOR HONEY.

IN answer to "T. B. P.," I may state that I was not placed, 2 and 3 both obtaining prizes.

I hope you will allow me to suggest for future guidance, that when a prize is given for the "best glass of honey" at a horticultural show the judges should calculate on the following:—Five points for greatest weight; four points for best colour; four points for general beauty. Any bee or bees' bread in the super to disqualify.

I write this to elicit opinions on the subject, as so few exhibitors are at present satisfied with the decisions of the judges.—MINTLYN.

OUR LETTER BOX.

WEIGHT OF FOOD REQUIRED (A. W. S.).—It is impossible to say how long 55 lbs. of Indian meal should keep your birds unless we know the nature of their run and of the green food they get. Are they in confinement? or do they roam at large?

COCHINS for a fortnight before exhibition (X.).—Feed on ground oats; but they must be ground so fine that they must mix into a paste. Failing this, feed on oatmeal. The fowls' meals should be small and frequent. They may have at times a handful of barley, some pieces of bread as often as you like, and at times a handful of white peas. Keep them very clean; dirt injures and diminishes feathering on the legs.

DORKING COCKEREL'S COMB CROOKED (A. D.).—We do not think that the comb will become straighter as the bird gets older. It is not a great disadvantage to have a twist in front; but it would be if it lopped over behind. A straight comb is in every way preferable.

PRIMARY FEATHERS OF WINGS PROJECTING (W. A. T.).—We know no method of making the feathers of your Brahma cockerels take their places, when they are hatched twisted outwards. It often happens to our own stock. We then always kill the bird. We know no other breed so subject to this irregularity, except Rouen Ducks.

DEFICIENCY OF EGGS (Bruno).—We expect you have neighbour's fare. We have many more hens and pullets than you have, and we do not think our average is much larger than yours. It is, however, increasing, thanks to Houdans and Crève Cœur. It is only by having pullets that you can depend upon winter eggs. We mean pullets of this year and of the proper age.

PLUMAGE OF BRAHMA POOTRAS (H. C.).—A tinge of bronze on the wing of a Brahma cock is not a disqualification. The white in the top-knot of a Crève Cœur is objectionable (not a disqualification), in chickens; but it is very common in adults, and almost the rule after two or three moultings. Indeed, in this particular they are subject to the same laws of plumage as other Poles. We believe the sex of eggs cannot be ascertained before hatching. The question is hundreds of years old. The theory always has been that pointed eggs produced cock chickens, round ones pullets. It has been asserted, and in some instances has been borne out in practice, that the early eggs of the clutch produce a majority of cocks. Speaking from experience, we believe that if a hen lay forty eggs, the first twenty will produce more cocks than the last. Our early hatches always have more cocks than our later ones.

POULTRY-HOUSE (An Ignorant Subscriber).—In the "Poultry-Keeper's Manual" there are plans for poultry-houses and the management of poultry, with descriptions and coloured portraits of the different varieties. You can have it free by post from our office if you send 7s. 8d. with your address. La Flèche or Houdan pullets would probably suit you as good layers.

DEATH OF HEN (J. W. C.).—The tape worms were sufficient to cause the death and the symptoms you describe. Bones ground fine are beneficial rather than injurious to fowls.

LARGEST BREED OF RABBITS (G. D. T.).—The largest Rabbits are the Flemish Giant. We have seen them 15 lbs. each. That may be exceptional. Bailly, in Mount Street, keeps them.

FANTAILS AND TRUMPETERS (A. L.).—Pluck some of the feathers out at once in both cases, then, when the new ones have grown, pluck the rest. Keep the birds warm for fear of frost. Mix a little hempseed with their food. The loft where Trumpeters are kept should have the floor kept scrupulously clean; dirt after washing ruins their leg-feathers.

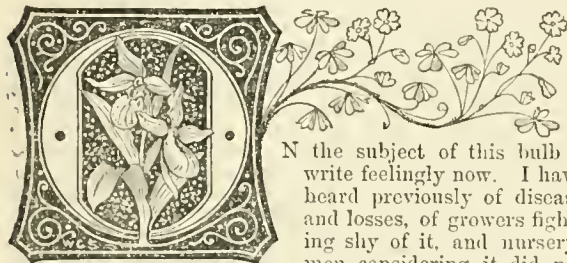
YELLOW POLLEN (C. J. A.).—The yellow pollen you saw carried in by your bees during October was, doubtless, that of the Ivy.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	NOVEMBER 21—27, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.					
			Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.						
21	Th	Meeting of Linnean Society, 8 P.M.	49.7	36.7	43.2	25	30	at 7	2	at 4	49	at 1	18	at 2	25	14	3	325
22	F		49.3	34.2	41.7	23	32	7	1	4	0	3	44	2	26	13	47	326
23	S	Royal Horticultural Society, Promenade.	47.4	34.8	41.1	17	33	7	0	4	9	4	9	3	27	13	31	327
24	SUN	23 SUNDAY AFTER TRINITY.	47.5	32.2	39.8	13	35	7	59	3	16	5	36	3	28	13	14	328
25	M	Day breaks 5h. 35m. A.M.	46.4	33.6	40.0	21	36	7	58	3	21	6	6	4	29	12	58	329
26	Tu		47.1	33.0	40.0	21	38	7	57	3	24	7	41	4	12	37	330	
27	W	PRINCESS OF TECK BORN, 1833.	47.0	34.2	40.6	19	40	7	56	3	23	8	20	5	1	12	17	331

From observations taken near London during the last forty years, the average day temperature of the week is 47.8°; and its night temperature 34.1°. The greatest heat was 62°, on the 25th, 1863; and the lowest cold 9°, on the 23rd, 1858. The greatest fall of rain was 0.95 inch.

THE GLADIOLUS AT HOME AND ABROAD.



N the subject of this bulb I write feelingly now. I have heard previously of disease and losses, of growers fighting shy of it, and nurserymen considering it did not pay owing to its uncertainty, but hitherto have been in the enviable position of knowing nothing of disease from painful experience. Not so now. I have just been looking through my bulbs, and anything more melancholy than their appearance it is impossible to conceive. I was sure it would be so: for the foliage had turned so yellow long before its proper time, so many spikes had never been properly open, the examination of one or two revealed such a miserable state of decay, that I felt sure a large part of my collection was doomed to the manure heap: and so, alas! it has turned out. If, then, I speak in the first instance of the Gladiolus at home, my readers will readily imagine that it is a very ticklish subject with me; while at the same time I must, in order to exonerate myself from the charge of not knowing how to grow it, detail a few facts which will tend to show that the disease from which my bulbs have suffered is as mysterious in its character as the Potato disease, and as destructive in its effects.

The garden in which my beds were situated is just the kind of ground that my good friend Monsieur Souchet told me was the best for the Gladiolus—a rich, deep, friable, dark loam, which will, indeed, grow anything well, except, perhaps, Roses; and I have taken care that the bulbs should not be planted in the same place in successive years, so that I must banish the suggestion which has been made to me by some, that the ground was Gladiolus-sick. This could not be, as there were Peas in it last year, and it was thoroughly well prepared last autumn, having received a good coating of dung, and being constantly turned over and exposed to the action of the air and frost during the last winter. I planted every bulb myself, and into each hole that I made for its reception placed some well-prepared light soil and sand, so that the bulbs might have every advantage in pushing their roots. They one and all speared well—there was not a miss in the bed, and I was anticipating (for my collection was finer than it had ever been), a magnificent display; but in the end of May symptoms of chlorosis appeared in the leaves. During the very dry weather that we had in the latter part of May and June the beds were carefully watered, but the disease went on until the disastrous results I have mentioned displayed themselves. What, then, is it? What caused it?

The bulbs at first begin to show a few small spots; by degrees these spread, until at last the whole bulb shrivels up, the crown and base alike become black, and it has to

be thrown away. But then every bulb is not affected. I have planted two of the same kind, and received from the same grower, within a foot of one another: one has remained perfectly sound, the other has become as black as a coal. It would not, one would think, be the soil, for then all would have suffered; moreover, last year in a bed in the same square I had no symptoms of the disease, while of some hundreds of *Bowieensis* and *Brenchleyensis* planted in different parts of the garden, but very few were in the least affected by it.

Another curious fact is, that the disease has attacked bulbs which have flowered; for only yesterday I saw with my friend and neighbour, Mr. Banks, of Sholden, some bulbs which had thrown up fine spikes of bloom, but immediately afterwards had shown symptoms of decay, and are now quite as bad as any of mine. Other growers in this neighbourhood have suffered; while, singularly enough, when I took some of mine over to M. Souchet last month to show him, he was quite astonished, and seemed to know nothing of this dreaded enemy, as bad in its way as those enemies he suffers from—the *ver blanc* and the mole cricket. It is a puzzle; and although I have forwarded some bulbs to one of our most distinguished botanists, I am without hope that he will be able to suggest a remedy. Some have imagined that it was the dry weather: so I thought at one time, but then they have much drier weather abroad, and I watered carefully.

I will, however, now leave this unpleasant topic, and have a few words to say about the Gladiolus abroad. I have already mentioned the rich treat I had—all the greater for being so unexpected—in seeing the collection of M. Souchet at the Universal Exhibition. I afterwards went down to Fontainebleau, intending to remain there a week or more, but was compelled to leave after a couple of days' sojourn, owing to the place not agreeing with one of our party; but I had a good deal of conversation with the Gladiolus raiser and grower, M. Souchet, the kindest and most amiable of men, and from him I gathered some few hints which may be serviceable to growers.

M. Souchet says it is quite a mistake to wait for the maturity of the bulbs before taking them up, that if soft they rather deteriorate; and that his plan is to take them up when there is any symptom of the foliage turning yellow after flowering—not even, indeed, always waiting for this; to cut off the leaves at once quite close to the bulb, separating the spawn, and then to put the bulbs in a cool and airy place to dry. It is hard to conceive the extent to which he grows them. He has built a new and very handsome dwelling-house for himself and for his bulbs. I may say the whole of the attics are reserved for them; the cellars are expressly built for them; and here, up-stairs and down-stairs, you may see positively heaps of them, like Potatoes, gradually drying off. Then he has a large number of shelves on which the spawn is laid until the spring, when it is planted in drills, and generally will make sufficiently large bulbs to bloom the next year. On the point of the size of the bulbs he was very decided. The large bulbs give more increase and a larger number of blooms, but the smaller ones throw up the finer spikes.

In some kinds, such as *Reine Victoria*, this is very decided, the large bulbs seldom throwing up a spike worth looking at, while small bulbs not larger than a filbert will bloom beautifully.

The most charming effect was produced by about a dozen of these spikes cut very long—quite to the ground, and then placed in a vase with some fine fronds of fern, as Madame Souchet had arranged them in her drawing-room with the most exquisite taste. It was just one of those arrangements that appear so very simple and elegant, and yet of which most probably one would make a mull if he attempted it; still helpful fingers might do it, and I can testify to its great effectiveness.

As to soil, he said that what we should call good market land grows them beautifully. It ought to be light and rich, heavy soil being injurious, and poor soil failing to bring out the proper beauties of the flowers; but no fresh manure ought to be applied.

As to the time of planting, it seemed to make very little difference. The bulbs from which the charming collection in the *jardin réservé* was cut had not been planted until the end of June, before which time, of course, the bulbs had perished considerably, but evidently without any injury. I would therefore advise no one to be in a hurry as to planting if there exist conveniences for keeping them, such as a fruit room or store room, but to wait for fine weather in either April or the early part of May; if they have not conveniences and the bulbs are in their way, the sooner after the middle of March the better.

And now as to varieties. There will be differences of opinion on this point; but taking my estimate of what a *Gladiolus* ought to be—viz., that the individual flowers should be well-formed, and the petals round, not pointed; that the spike should all face one way, and not be in the least winged; that there should be a sufficient number of blooms out at once to make a handsome spike;—I say, taking all this into consideration, it is evident that a very large number of the varieties at present grown are not up to the mark, and will be by the connoisseur discarded.

It is one consolation to me in the loss of my collection that, beginning almost *de novo*, I shall only have first-rate varieties. I have carefully gone through the catalogues; and the result is from personal observation, combined also with that of some of our most eminent growers, that the following list contains the *crème de la crème* of the French varieties.

Adolphe Brogniart.—A noble flower of 1866. Light rose ground, flamed with orange.

Belle Gabrielle.—A fine spike. Lilac rose, lightly flamed with rose.

Chérubini.—White, largely flamed with carmine violet.

Dr. Lindley.—Tender rose; edge of petals flamed with carmine cerise.

Eurydice.—Beautifully formed flower of 1865. White, flamed with carmine rose.

Félicien David.—Splendid spike. Cerise rose.

Fulton.—Cerise rose, with white spots.

Galilé.—Large flower. Currant red, and brilliant in colour.

James Veitch.—Lively cochineal red. A grand and effective flower.

Lady Franklin.—White, lightly tinted with rose, and finely striped with carmine.

Le Dante.—Very large, well-shaped. Deep rose, white spot. Showy.

Lord Byron.—Very brilliant, but rather pointed in petals.

Madame Furtado.—A remarkably fine flower. Beautiful shaded rose, strongly marked with deep rosy carmine. An excellent variety.

Madame Vibronin.—Clear rose, shaded with bright rose; white throat.

Maréchal l'ailant.—Brilliant scarlet, but I fear delicate.

Marie Dumortier.—White, splashed with rose, purple spots. An excellent old variety.

Meyerbeer.—A remarkably fine flower. Very brilliant capucin red, flamed with vermillion. Very free-flowering; one of the best.

Milton.—Well-formed flower. White, lightly tinted with rose, largely flamed with red. Good.

Newton.—Crimson red, shaded and marked with white lines.

Prince of Wales.—Brilliant fiery red; white spots striped with violet.

Princesse Marie de Cambridge.—Fine white-ground flower of 1866. Large, clear, carmine spot.

Reine Victoria.—Splendid white flower.

Walter Scott.—Lively rose. A very good flower.

Shakespeare.—One of the very best. Flowers large, well-formed, white, very lightly flamed with carmine rose.

I have said nothing about the new varieties of 1867; but *Semiramis* is a grand flower; and, if I mistake not, *Eugène Scribe*, *La Fiancée*, *Mozart*, *Norma*, *Princess Alice*, *Rossini*, and *Uranie* will well maintain the high position which has been accorded to M. Souchet's varieties.—D., *Deal*.

VINES AND VINE BORDERS.

"H. S." says (see page 290), that it is not natural to treat Vines as English gardeners do. This I will not attempt to deny, but I would ask "H. S." if there are not many plants grown in English gardens, and greatly improved by high cultivation, and treated anything but naturally? There are many plants quite familiar to all who are acquainted with horticulture which, in their natural state, are very insignificant; but under exotic treatment they are objects of wonder and admiration.

Now, the Grape Vine in England must be treated as an exotic, or its produce will be anything rather than satisfactory; but although I should recommend the Vine to be treated in England as an exotic by all who wish to cultivate it with profit, yet I should never advise any one to keep a vinery at a temperature of 100°, with a close damp atmosphere charged with pestilential vapours, as stated by "H. S." to be recommended by Mr. Thomson and endorsed by half the gardeners in the kingdom. This no sensible man would do, or recommend others to do; neither do I see that Mr. Thomson recommends such a treatment in his treatise on the Grape Vine, except to destroy insects, and, perhaps, "H. S." may some day be compelled to have recourse to something near the same treatment to clear his Vines of the red spider.

If "H. S." will again take the trouble to read Mr. Thomson's treatise he will find that he recommends plenty of fresh air in the cultivation of the Grape Vine, so much so that he gives an illustration of a plan whereby he provides the Vines under his charge with a constant supply of fresh air—a plan which, I think, is remarkably well adapted for houses where very early forcing is to be carried on.

While on the subject of Mr. Thomson's treatise, I may be excused if I recommend it to all young gardeners who are at all interested in Grape growing as a thoroughly practical work. Mr. Thomson is quite unknown to me, but a sense of justice induces me to make these remarks after what "H. S." has said about it.

I will pass over the other questions of "H. S.," and only touch on the vital point—namely, the border. Here, it must be admitted by all, is the foundation of good crops of Grapes. Now, a Vine border in one part of the country may require to be very different from a border in another part. For instance, "H. S." says he has all his Vines planted in inside borders in only the natural soil of his garden with a small addition of manure. This sort of border may do very well with "H. S." in the neighbourhood of Hounslow, where the natural soil is some of the best suited for Grape growing in the country; but, notwithstanding, I question if in a few years "H. S." will not find his Vines begin to fail unless he supplies them with some other food besides the natural soil. In places where the natural soil is not suited to Grape growing, or where the drainage is not good, it would be madness to plant a vinery with such a border.

There are here two vineries, which were built in 1861. They were completed, and the young Vines—Black Hamburgs in one house and Muscats in the other, were planted about the end of June. They grew satisfactorily that season. The next season they made wonderful growth, many of the rods being from 30 to 35 feet long from the eye where they started from, and thick in proportion. It was thought that each rod the next season would ripen 6 lbs. of Grapes, and this was done I believe, but not thoroughly. The Vines still grew very vigorously, and were thought by many who saw them to be doing wonderfully well till they saw the fruit of the Muscats, when it was thought there must be something wrong about the roots.

In June, 1864, I took charge of the gardens here. These young Vines were then growing very vigorously, and were carrying a crop of about 10 lbs. of fruit to each rod. The Hamburgs were just beginning to colour, and ripened tolerably well; but some of the berries shrivelled, others shrank. This I was unable to account for in the Black Hamburg; but when in a week or two after the Muscats had passed their

stoning period I saw they began to shank very badly, I was certain the roots were in fault, and on making inquiries I found the borders were dug out with the view of their being concreted at the bottom, but that was never done. The soil, the top spit from an old pasture, mixed with some stable manure alone, was wheeled on to the natural subsoil, which is a stiff clay, such as all the bricks are made from in the neighbourhood. Here, then, was just reason to conclude what was the cause of shanking. Still, the Vines were wonderfully healthy and robust, and at the end of this season (1864) they did not exhibit the least trace of insects. That autumn and the following spring I had not time to lift the roots and remake the borders, but determined to try what careful cultivation would do the next season, 1865; but, despite my care, I could not prevent the Black Hamburg from shanking a few berries, and the Muscats were as bad as in the previous season.

During the winter of 1865-66 I had a deep drain carried some 400 yards to the nearest point of outlet to drain the stokeholes, which were often flooded during the winter, sometimes with 2 feet of water; but I contrived to carry this drain as near the Vine borders as possible, being determined to lift the roots of the Muscats and remake the border in the spring, which I did in March. I should have preferred the autumn, but circumstances then prevented me.

I also should, were I going to adopt the same treatment, remake only half the border at once, as it would not check the growth of the Vines so much—namely, supposing the border to be part inside and part outside, I would do the outside one season and the inside another season, as in my case, with all the care we could bestow on the roots during the process of forking them out, we could not prevent their drying a great deal, as it was very dry weather during the time we were about it. During the whole time we were forking the soil out from the roots I did not find one young fibre that was not more or less injured by the water which encompassed the roots. I say encompassed, because the natural level of the water here during the winter is from 2 feet to 2 feet 6 inches from the surface, and often, after heavy rains, it will be from 6 to 9 inches nearer for a week or more at a time, so that all the lower roots in these borders were during the winter covered with water.

We found abundance of rotten fibrous roots, in the outside border more particularly, with plenty of indications where they had pushed large fleshy roots in the previous autumn.

Here, then, is quite enough to sustain Mr. Thomson's theory about Grapes shanking. Not that I hold that Vines lose all their active roots, and are then able to start in the spring with vigour; but they lose a great many young roots during the winter when planted in rich undrained soil. With the given amount of sap stored up in the Vine, and with the action of the good roots left uninjured, the Vine is enabled to start in the spring with vigour; but when the great strain is put on the Vine to enable the Grapes to pass through their stoning period, the supply is not sufficient to meet the demand: hence follows shanking.

I should have passed over the remark by "H. S." about the natural soil being efficient, were it not that many employers on reading such an article would often think and say their gardeners want to make too much fuss over such things; that there is no need of half the trouble and expense to grow Grapes. Such a conclusion is a great mistake. Would it not have been far better if, in the first place, those borders of which I am writing had been properly drained and concreted, so as to have kept the roots under control, as well as the stems, leaves, &c., of the plant? Had they been so treated in the first place it would have been many pounds saved for my employer, besides the unpleasant thought that things had to be done over again.

After removing the old border to the depth of 3 feet from the level of the front I put in 3 inches of gravel, on that from 6 to 8 inches of concrete, allowing from Saturday evening till midday on Monday for the concrete to set. I then put on 9 inches of brickbats, coarse gravel, &c., for drainage, and on this the soil, composed of the following materials—namely, seventeen cartloads of loam, six of brick rubbish, old mortar, &c., two of chalk, three of burnt clay, two of old stable manure—in all thirty cartloads. This, as "H. S." will see, involved a great amount of labour that could have been saved if the work had been properly done in the first place—in fact, it employed eight men wholly from last Friday morning till Tuesday evening, exclusive of horse labour.

I have read with pleasure all the articles on this subject in *THE JOURNAL OF HORTICULTURE*, and believe many of them are right in the main point, though they seem to differ, and I

believe much information will be gained from these discussions. —JOHN MAY, *Westfield Gardens, Harant.*

WHEN buyer and seller disagree there is seldom any difficulty in finding some one ready to take part in the quarrel. "H. K.," who writes from France, may be a disciple of Mr. Thomson; but that does not add to the value of the book I have purchased. Neither does the temperature of 110° registered last August in the Pontchartrain houses prove that our English amateur's vinery should resemble the stoke-hole of a mail steamer in the Red Sea. "H. K." ought to see that I bought with the treatise the right to interrogate the author, and I think Mr. Thomson should have met my inquiries in a manner to be of service to those for whose guidance his treatise was principally intended.

I cannot comply with the suggestions of "G. S.," because I have no "mode of Vine culture" to recommend, and if the truth of what Mr. Thomson has written for my use can be established, no one will be more satisfied than myself; but if it will not bear investigation, what use can the treatise be to any one? "G. S." must have seen that I am aware tropical temperatures are not wholly confined to the tropics. I have taken advantage of this to show that Vines do not grow in such places. Madras has a rainfall of 8 feet, just what its temperature requires, and the heat of the soil is in proportion to that of the atmosphere. Compare this with the tropical temperature recommended by Mr. Thomson, an outside Vine border, and our rainfall of little more than 2 feet.

We must also remember that plants requiring three months of tropical heat must have a corresponding spring, autumn, and winter temperature. In countries bordering on the tropics this would follow naturally enough, and the winter would not be one of months but of weeks only. Mr. Thomson says that Vines started in February will have their leaves falling off in September. Now, if we take three months from the time the bunches are in flower to the ripening of the fruit, with a temperature of 70° to 90°, we have five months to divide between the spring and autumn, and four months for the Vines to remain in a state of total inactivity. That Mr. Thomson's Vines are really inactive during the four months of winter, and not storing up sap as he has attempted to show, by reference to the writings of Dr. Lindley, is proved by his saying that it is not advisable to keep Grapes hanging on the Vines after the sap begins to rise.

There is no rest in nature in the sense understood by gardeners, and every matured and perfect life is capable of reproducing itself if placed in a condition to do so. A Vine eye cut at any time from a matured shoot, will make a strong plant if placed where it can receive light, heat, and moisture, and whether it be cut four days after the maturity of the shoot, or four months, success is as certain in one case as in the other. Although plants in their natural habitats are, to a certain extent, in a state of activity or slow progression, retarded or accelerated, according to the warmth and moisture of the air, after the fall of the leaf, this would not be true of the Vine exposed to the influence of our climate.

It has been said that I have made a great mistake in taking mean temperatures of climate in illustration of my arguments in favour of lower temperatures than those recommended by Mr. Thomson, because in Languedoc the sun beats for days on the bare skin of the Grapes, when the temperature is upwards of 100°. Well, let us leave Languedoc her sun heat, and take 12° from her mean summer temperature, and we shall have just the climate for producing Grapes like bags of sour water, and now, if it were possible to add the 12° taken from Languedoc to our climate, our mean summer temperature would equal that of the south of France. Where is the mistake?

The roots of Mr. Nicholls's Vines would not back the buds up and enable them to progress. He expected soon to see the bunches show, but for six weeks saw but little change, and wondered why such great buds should produce such puny little shoots. What says Mr. Thomson? "While the stored-up sap lasts they grow vigorously enough, but a period arrives when it is exhausted, and the new comes but slowly, for the old roots that remain are just beginning, through the action of the foliage, to start into life a fresh set of young ones that are able as yet to supply but little. This takes place when the berry is passing through the stoning period of its existence."—H. S.

Your correspondent, "H. S.," denies the possibility of a Vine having stored-up sap. Allow me to assure "H. S."

that the above is no impossibility, as the following fact will prove.

We had to renew part of a vinery, and for convenience cut the branches from the old Vines, carried them to a general deposit, and soon afterwards they were partly covered with fruit-tree prunings. This was in January, 1867, and in July last the Vine branches had made shoots 6 inches long, and not very weak.—C. McLAREN, *Letton Hall, Norfolk*.

[We have afforded every opportunity for a free discussion of this subject, and we feel the time has now arrived when it should cease. Much valuable information, and many facts have been elicited during the continuance of it; but our own opinion is that the results of the systems practised by Mr. Thomson, and others of the first-class gardeners of this country, are such as to warrant a continuance of them, where the object is to obtain Grapes of the highest excellence. Nothing proves this more incontrovertibly than the fact that the Muscat of Alexandria grown in its native district on the shores of the Mediterranean, never approaches to the size and quality it acquires in vineries under the care of our first-class gardeners. That Black Hamburgs and other varieties may be grown profitably and good without high temperatures, as is stated by "H. S.," there is no doubt, and we purpose publishing next week a communication just received from Mr. D. Thomson on that subject.—Eds.]

ZIZYPHUS LOTUS.

CONSIDERING the interest which attaches to this plant, as being, in the opinion of the best judges, the genuine *Homer* Lotus, it has certainly surprised me never to have seen it in any nurseryman's catalogue, nor ever to hear its name mentioned, more especially as Loudon states that it ripens its fruit in a greenhouse temperature.

Burchard had tasted it in Africa, and compares it to gingerbread. The Emperor Julian, while praising his favourite fruit, the Fig, says that it is the only one to which Homer applies the epithet "sweet," but he seems to have forgotten that the epithet "honeyed" is applied to the Lotus.

Were it not for the generally current opinion in favour of the *Zizyphus* being the true Lotus, I confess that I should rather have inclined to the Date, which is more generally used as an ordinary food, and which the Arabs of the present day value as highly as did the Lotophagi of old. Not having a Homer to refer to, I cannot remember whether he even mentions Dates by their own proper name.—G. S.

STOCKS AND OTHER HARDY FLOWERS.

In your notice of the Stocks which I forwarded to the Floral Committee held November 5th, you have termed them "Brompton Stocks." They are not Brompton, however, but real Intermediate Stocks, and among the most useful plants which any one can grow, both for bedding and pot-culture. We have at this date two rows each of the purple and white which are perfectly dazzling; they have been so for the last three months, and will continue so till the new year with ordinary weather. There is a scarlet grown in East Lothian of the very same strain, and I regret I did not forward specimens of it also. The purple and white are the productions of Mr. Campbell, gardener, Traprain, who has selected and saved, saved and selected, until he has produced in these Stocks the finest bedding purple and white plants in existence; indeed we have no white bedding plants that at all approach the Stock, and Purple King Verbena is poor beside the purple Stock, and the scarlet is equally effective.

It is a wonder that Intermediate Stocks with their wonderful blooming powers have not been more generally grown for summer and autumn flower gardening long ago, and for spring gardens they are perfectly unique. By sowing a little later, and lifting and wintering in pots in cold frames, they make such a display in April, May, and June as nothing else can approach for effect. Unless in severe winters, they stand unprotected in the open borders here. Here is another instance of the fact that the gay ribbon, panel, or scroll border, or beautiful bed, need not be the monopoly of the rich, with their stoves and pits. By the aid of these Stocks I would undertake to plant a border with purple, scarlet, white, yellow, &c., which would tax all the hothouses in the country to match or surpass, and this without any further aid in the way of glass than can be derived from a few common garden hand-glasses.

These hardy Stocks not only stand all weathers better than our more tender plants, but last much longer in bloom.

I may remark that the weather for the last six weeks has been very favourable for flowers here, and many things are still in beautiful bloom. Conspicuous among the long-flowerers, besides the Stocks, are Gazanias, Pelargoniums, Tagetes, very fine, and, until the 6th, when a slight frost cut it down, Iresine was most effective. Yellow Pansies and *Tritoma grandis* are just coming into bloom, while *Tritoma uvaria glaucescens* is hardly over. What splendid plants for shrubbery borders *Tritoma grandis* and *Gynierum argenteum* would be if associated together! Cannas, Wigandias, Indianrubber Plants, Solanums, &c., were housed last week quite fresh. Cannas are hardier than most of our summer bedding plants, and so are Solanums and Wigandias.—DAVID THOMSON, *Archerfield*.

FOWLER'S INSECTICIDE.

As the Messrs. Fowler are unknown to me I am not careful to answer the charge brought against them by Mr. Rivers, of having invented a childish name for their preparation, though the term childish does not appear very appropriate. The efficacy of the preparation is more important than its name, though the latter may be a little pedantic; nor is it more of a nostrum than Gishurst Compound, which my friend recommends in the same paper. Of course we should all like to know how to prepare our own remedies; but if some person has found one much better than we have discovered, is it not wise to make it known and use it, though it be a nostrum?

Believing the "Insecticide" the most efficacious insect-killer (and I have used largely all those mentioned by Mr. Rivers), I shall employ it till I find out a better, whether its name be altered or retained. I dipped my plants as the quickest mode of application, and attended with the least loss of the material employed, and also because the destruction of the insects, if effected, could not be attributed to friction. Of course the same end would be attained by using the syringe, but much of the liquid would have been wasted.

If methylated spirit only kills scale, the constitution of which has been weakened by weekly doses of quassia water, and requires to be applied by a brush to each individual insect, it appears to me a very inferior remedy to one which kills at once lusty well-fed scales, such as any want of care had allowed to flourish. If to keep Orange trees clear from scale it be necessary to syringe them every week with quassia, and afterwards to examine them, brush in hand, also every week, I think a good many will, if even they are commonly cultivated, exhibit evidence of want of care and attention. Mine have been washed, leaf by leaf, with a sponge dipped in Gishurst Compound, four or five times during the summer, besides being syringed almost daily, and if they had wanted much more of such attention I think they would have found their way to the rubbish heap in a little time.

Having found what appeared to be a first-rate remedy for this troublesome pest, which appears to do no injury to the most delicate foliage, I thought it right to call attention to it. If it is tried, and others will give their experience, we shall soon know all about it. As far as I have tried it, a single drop kills every insect it touches, and injures no plant. Ants are destroyed at once. It is said to kill mealy bug; fortunately I have never had any to kill, so cannot say if it does so or not.

Fowler's Insecticide is, of course, not my nostrum; but I am inclined to adopt it from what I have seen of its effects, and if it proves all I think it to be at present, shall not mind the name it has received. "A Rose by any other name will smell as sweetly."—J. R. PEARSON, *Chilwell*.

I AM sorry to see in your Journal of the 7th inst. Mr. J. R. Pearson's recommendation of Fowler's really valuable Insecticide so strangely treated by "T. R." He loses sight of the fact that in Mr. Pearson's trials the Insecticide, without any injury to the youngest leaves, killed scale that the spirit did not kill. My experience convinces me that even for the special purposes he recommends, not one of "T. R.'s" remedies is equal to Fowler's Gardeners' Insecticide.—H. S.

I HAVE read with a little surprise "T. R.'s" letter on the above subject. Methylated spirit may, as "T. R." asserts, destroy scale when in a weak state; but I have not till now heard of anything that will entirely destroy this—indeed, any other insect, without injury to the plant, as Messrs. Fowler's

"childishly"—called "Insecticide" is said to do, and which, from the results of experiments I have made, I am satisfied it will. The simple manner of applying the article would alone commend it to any earnest person's notice, it being possible to either dip, syringe, or sponge the plant infested.—W. KNIGHT, *Hailsham*.

FRENCH AND ENGLISH GARDENING.

IN THE JOURNAL OF HORTICULTURE for the 12th of September there is an article on this subject by Mr. Thomas Rivers, and to that article, although a couple of months have now passed, I wish to reply. Since its appearance I have been continually engaged in travelling both in the British Isles and in France, which must be my excuse for not having noticed it ere this.

To put the matter clearly before your readers I had better state that the article which gave rise to the discussion in the *Times* contained a concise account of such few points in French horticulture as it seemed to me were worthy our attention. In it I first stated that the French horticulturists were on the whole less advanced than our own, but that there were some points in which they were superior. I spoke of their fresh and tasteful way of decorating rooms and halls for ordinary and festive occasions by using a profusion of graceful-leaved as well as flowering plants; of their successful culture of the Apple, Pear, and Peach; of their vegetable, salad, and especially Asparagus culture; of their system of framing, excellent market gardening, &c. Next day there appeared in the *Times* a letter from "A LONDON MARKET GARDENER," in which the public were told that everything French was bad and contemptible; that the Asparagus was like "the Atlantic cable;" the Pears "as a rule coarse, granular, and insipid;" one Ribston Pippin or Sykehouse Russet "was worth a host of their Calville Blanche," &c.; the Apricots were mealy, the Green Gages watery, the Peaches woolly, and the Pears had another good quality added to those already quoted—they were "flaccid." To that letter I felt bound to reply.

I took the statements in detail, and replied to them in full. He said the cordon system of Apple-growing was only suited for amateurs, and that it was liable to canker and every other ill. Now, I am no advocate for the cordon system except in special cases; but there is one variety of it that I believe most excellent, and that is the Apple as a low horizontal cordon, trained along a galvanised wire, so as to form an edging to the squares or borders in the fruit or kitchen garden. I said, in defending this particular system in the *Times*, "It is merely a carrying further of the best principles of grafting and pruning—a wise bending of the young tree to the conditions that best suit it in our northern climate. The simple fact that by its means we bring all the fruit and leaves to within 10 inches or a foot of the ground, and thereby expose them to an increase of heat, which compensates to a great extent for a bad climate, will surely prove a strong argument in its favour to every intelligent person." I believe it to be the best and soundest of all forms of the cordon system (this opinion is only given after having seen it afford a good result in very many gardens), and that the day will yet come when this fact will be patent to every British gardener. In a contemporary gardening journal Mr. Rivers has stated this form to be only suited "for small gardens, and no others!" the "wire tripping one over into the Cabbages," &c. The answer to him on that special point may serve to explain to your readers why I thought the horizontal cordon worthy of notice and defence in the *Times*. "Well, if this cordon be no better developed than to be invisible, the less we have to do with it the better; but where it is thickly and regularly set with a stubby spray of fruit buds, and a dense crop of noble fruit, as I have seen it at Ferrières, at Chartres, and at many other places, then it becomes a thing which catches the eye for its beauty and utility. If I were making a garden to-morrow as large as Frogmore, I would run a line of wire round every plot of it at a foot from the ground, and on that train the best kind of Apples, believing this cordon to be much better, more useful, and more easily managed than either the bush or pyramid on the same stock! The following are my reasons for this assertion: It may be placed round the squares of a kitchen or fruit garden, so as to act as an edging, and thus in numbers of gardens it may be adopted to an extent sufficient to supply the fruit-room with splendid Apples without devoting a special quarter to them, or, in fact, losing any space thereby. The wood, leaves, and fruit are more fully exposed to the sun than in the case of either pyramid or bush, or any other method of growing Apples away from walls—an advantage for

all parts of England, but especially so to cold, northern, and elevated parts. The form is so definite and so simple, that anybody may attend to it, and direct the energies of the little trees to a perfect end, with much less trouble than is requisite to form a presentable pyramid or bush. It does not, like other forms, shade anything, not even so much so as a low-growing vegetable, for beneath the very line of cordons you may have some slight crop. They are less trouble to support than either pyramid or bush; always under the eye for thinning, stopping, &c.; easy of protection, if that be desired; very cheap in the first instance; and therefore this is the best of all known modes of obtaining first-class garden Apples." So much for the first statement of the person who wrote as "LONDON MARKET GARDENER" and for Mr. Rivers's opinion and objection. Time is certain to show where the truth lies in this point, for already some of my friends are giving it a fair trial, not taking for gospel Mr. Rivers's repeated assertion that the true French Paradise stock is tender or sickly on moist and suitable soils, but giving it a trial in competition with what is called the "English Paradise."

To contend with the "LONDON MARKET GARDENER," that French Pears are not what he describes them, is as needless as to find a fresh proof that the earth is round, or the Channel impregnated with salt. He says the same may be said of French Apples—i.e., "coarse, granular, and insipid," and then talks of one English Apple being "worth a host of Calville Blanche!" At page 140 of THE JOURNAL OF HORTICULTURE for 1866 Mr. Rivers devotes a short article to the Calville Blanche Apple, and tells us in rather an interesting way of the "many years" it took him to believe that it was the "finest of all Apples for the kitchen." But eventually he believed that of it, and wound up his article by declaring it to be "as superior to the Normandy Beedings as a Pine is to an Orleans Plum!" We all know it is a capital dessert Apple. I mention this for two reasons—to point out the nature of the truths of the "LONDON MARKET GARDENER," and also the great length of time it took Mr. Rivers to believe what one would think a single trial sufficient to prove. This peculiarity of his pomological sagacity may have something to do with his repeated attacks upon anybody who gives an opinion in the least at variance with his own on even the simplest matters connected with fruit culture. Would it not have been more becoming of me to have waited twenty years or so before pronouncing an opinion upon any matters which he has taken under his wing, even though they be so simple in their merits or demerits that anybody can see these in a moment? Perhaps by such time they would have been duly endorsed by the great arbiter of all things pomological. I do not wish to omit a single point in this objector's letter, simply that your readers may judge of its merits, and they will oblige me by bearing in mind that while Mr. Rivers commenced his long letter by sagely remarking that there was something to be said on both sides, the whole of it was an attempt to misrepresent and to counteract with his name and his well-known French experiences, of which he has so often reminded us, my work in French gardens during the past nine months.

The next "truth"—I am not passing by a single point—is that, although "Covent Garden was crammed with the finest French fruit," English fruit "of half the face" will always command more money. Calville Blanche Apples of French growth and moderate quality are now selling in Covent Garden Market at 1s. 6d. a-piece; while a not-first-class and bruised Duchesse d'Angoulême brings from 6d. to 1s. Many thousand pounds-worth of French Pears alone are brought to our markets every year, while other and more perishable fruits are also sent in considerable quantities, notwithstanding the difficulty of packing and expense of carriage. After his sweeping denunciation, I assured him that these fruits with "far less water, meal, and disagreeable acid in them than it has often been my lot to find in England, are now (August), selling in the streets of Paris at a price which places them within the reach of the poorest *gamin* of the town. Good Green Gage Plums may be had at less than 2d. a-pound, and in the great central market this morning I saw them of prime quality marked 30c. the demi-kilogramme. Peaches are to be seen now in every little fruit-shop in Paris—their price in London confines their use to the wealthier classes. It is so with not a few other things in the fruit way. In the return of the Covent Garden prices for the last week I find Peaches marked from 4s. to 8s. per dozen. They were selling prime quality this morning in the Paris market for 2f. the basket of eight fruit. For the same quality we should have to pay more than double the

price at the cheapest time in England. Of course if these Peaches were sent to another country they must either be pulled before being ripe or become nearly worthless on the way, for a bruised Peach loses quality in half-an-hour. Notwithstanding these difficulties we are told that 'Covent Garden is "crammed" with French fruit.'

To his opinion of the magnificent Asparagus which the French grow, and the culture of which I gave a concise description, I thus replied:—"He compares the stalk of French Asparagus to the Atlantic cable, the tenderest part of it to 'ozoneed,' and asserts (what a true-born Englishman he is!), that 'a hundred of English Asparagus contains twice the edible substance and ten times the flavour to be found in the wattle of rods imported by us from France!' Although inquisitive about vegetables, I have not yet tasted 'ozoneed;' but if it be as nice as the Asparagus served in a respectable Parisian restaurant, I would advise 'A LONDON MARKET GARDENER' to turn his attention to its cultivation, especially as French market gardeners are so successfully competing with English ones for the supply of the London market with better known and appreciated materials. The white stalk of French Asparagus is hard, because it is blanched. To avoid that all we have to do is to save ourselves the trouble of piling little mounds of earth over each stool in spring; in a word, to cut it as we do now, and adopt their system in all other respects. The French grower knows that to have the larger portion of the stick green is the best way, but Fashion insists upon having a long white handle attached to the edible portion of the Asparagus. If it were brought to the Paris markets without this it would not find buyers."

There is one other point, but as we shall have to deal with that in a future letter, I now omit it, having, I trust, left these strange "truths" plainly before the impartial reader.

I heard no more of the "LONDON MARKET GARDENER," but after the lapse of a week or so a short letter appeared in the *Times*, signed "T. F. R.," stating that "your correspondent is quite correct," alluding to all I had said of French fruit culture, and not containing one word of objection to anything previously stated by me. The writer then proceeded to give some few reasons for his opinion, stated how many thousand plants it would require for an acre, and then wound up with a few words of advice to those about "planting orchards of cordons!" Now, I had not said a word about planting orchards of them, for apart from Mr. Rivers's reason given in THE JOURNAL OF HORTICULTURE in 1866 ("the Paradise is a surface-rooting stock, and requires the cultivation of a garden"), I know many reasons why the thing should not be attempted in that way, and thought it much better that people should know its value and cost as a garden crop before they tried it on a larger scale: therefore I felt it my duty to caution the readers of the *Times* against beginning their cordon experiences in such an unwise way, and wrote as follows:—"In horticulture as well as in many other matters it is better to get used to any novel system before we try it very extensively: therefore my advice is, plant a snug and well exposed little border with those cordons, or run them around the square of your garden as the French do, taking care, however, that they are not overshadowed wherever they may be placed. If we give it a fair garden trial it will, I think, be quite enough till the pruning, expense, and everything else connected with it be familiar to the planter."

This harmless and almost necessary advice might not have been expected to offend anybody, but very shortly after "T. F. R.," who wrote at first to say that I was "quite correct," wrote to try and prove how very wrong and incorrect I was, and said, among other things, that I had not stated the reason why the horizontal cordon was the best—i.e., the greater amount of heat received near the ground—though I had distinctly stated it both in the article and in the reply to our friend the "MARKET GARDENER!" Then quickly appeared the article by "T. R." in THE JOURNAL OF HORTICULTURE. Mr. Rivers opens it by saying that I am "evidently a young gardener;" and there he is right; but I hope to grow old at gardening as well as Mr. Rivers. Still more do I hope that when I am Mr. Rivers's age, I shall at all events not be such as to come down upon any young man, working in the same path, with any influence my name may possess, to attempt to retard his progress and throw discredit upon his efforts.

Thus your readers will perceive that no word of objection came from "T. R.," or "T. F. R.," previous to my cautioning the readers of the *Times* against taking the advice of "T. F. R.,"—"planting orchards" of cordons on wires.

Next week I shall deal with Mr. Rivers's essay on French

gardening.—THE WRITER OF THE ARTICLE ON HORTICULTURE IN THE "TIMES."

SURFACE OR TOP-DRESSING ORCHARD HOUSE TREES.

WHETHER Mr. Pearson's plan of not disturbing the surface soil of potted Peaches be or be not an improvement on Mr. Rivers's system of top-dressing, turns, I think, on this question—Are the surface fibres annual or perennial? If the former, their removal after their work is done, cannot be prejudicial. If the latter, the plant may need them for another year.

Those who are interested in the solution of the question, may easily bring the rival systems to issue, by treating some of their trees in one way, and some in the other; but it will require several years to come to a definite conclusion, as the soil in a pot, if unrenewed, may supply support for three years, and yet fail in the fourth.—G. S.

STOKE NEWINGTON CHRYSANTHEMUM SHOW.

CHRYSANTHEMUMS are always seen in great perfection at this Show: and at that held on the 14th and 15th inst., though as a whole scarcely equal to those exhibited during the last two or three years in quality, they were above the average in quantity. For a season so unfavourable to the Chrysanthemum as that which we have experienced the display was most satisfactory, and the only wonder was that so many exhibitors could produce blooms in such excellent condition as they did; for all varieties are unusually late this year, and many appear likely not to open at all.

Specimen plants in pots, notwithstanding some amount of forcing, were for the most part not in such full bloom as they would have been a week or ten days later. The best in the class for six came from Mr. Forsyth, who had Dr. Sharpe, a very effective dark crimson; Alma, Golden Christine, Lady Harding, Annie Salter, and Vesta, all of which were very well grown and in good bloom. Mr. George, gardener to Miss Nicholson, Stamford Hill, who was second, had Vesta in fine bloom; Prince of Wales, a fine-grown plant, but not forward enough; and St. George, a sport from Golden Hermine, with reddish buff flowers, evidently a fine variety for specimens. For three plants Mr. Drain, De Beauvoir Town, was first, and Mr. George second, with Christine, Vesta, Golden Christine, Prince Albert, and Lady Harding.

Of specimen Pompons the best six were furnished by Mr. Butcher, the kinds being Bijou de l'Horticulture and White Cedo Nulli, especially good; Lilac and Golden Cedo Nulli, Hélène, and Andromeda. Mr. Forsyth was second with, among others, White Trevenna in fine bloom, Cedo Nulli, and General Canrobert. In the class for three plants the same exhibitors occupied the same relative positions, Mr. Butcher being also first for six pyramidal plants. For six standards Mr. Forsyth was first, having Lilac and Golden Cedo Nulli, Andromeda, and Calliope in excellent bloom. Mr. Butcher was second.

Cut blooms were with but few exceptions very good. The best 24 came from Mr. Slade, of Kingsland, and consisted of Beverley and Golden Beverley, both very fine; Formosum, White Globe, Jardin des Plantes, Prince of Wales, very large and fine; Golden Dr. Brock, Mrs. George Rundle, a beautiful pure white, though not large; Gloria Mundi, Prince Alfred, very fine; General Slade, Lady Harding, fine; Lord Ranelagh, General Slade, Rev. J. Dix, Orange Perfection, Cherub, Gloria Mundi, Lutetia Formosum, King of Denmark, and Duchess of Wellington. Mr. James, Stoke Newington, was second; and Mr. Berry, gardener to the Earl of Leven and Melville, third. Mr. Berry was first for 12 blooms with Empress of India and Queen of England, each nearly 5 inches across; Lady Harding, Nil Desperandum, Prince of Wales, and Lady Slade, also very fine. Mr. Slade, who was third, had a beautiful bloom of Prince Alfred, and others likewise very good. In another class, also for 12 blooms, Mr. Heard, De Beauvoir Town; Mr. Howe, Shacklewell; and Mr. Drain, took prizes in the order of their names, exhibiting, besides varieties already named, Sir Stafford Carey, Rifleman, John Salter, St. Patrick, Albic Passaglia, and Novelty. For six blooms Mr. Wheldal took the first prize with Mrs. George Rundle, Her Majesty, Golden Beverley, and Beauty, both very large, Prince of Wales, and Pio Nono. Mr. Moxham was second with Prince Alfred, very fine; St. Patrick, Beverley, Jardin des Plantes, Lady Harding, and Golden Beverley; Mr. Heard being third. In the maiden class for the same number of blooms the prizes were taken by Mr. Shields, Stamford Hill; Mr. Crute, Holloway; and Mr. Smith, Haggerstone. Venus, Empress of India, Queen of England, Prince of Wales, and other varieties were very fine.

The first prize for Anemone-flowered varieties was taken by Mr. James, who had fine examples of Madame Godereau, Gluck, Fleur de Marie, George Sand, Queen of Anemones, Prince of Anemones, and Marguerite d'Anjou. Mr. Howe, who was second, had also a fine stand. The same two exhibitors were respectively first and second for 36 Anemone Pompons, of which Antonius, Regulus, Mrs. Astie, Florence Nightingale, Madame Montels, Sidonie, and Firefly were conspicuous.

The extra prizes offered by Mr. Salter for Countess of Warwick

were awarded to Mr. Heale and Mr. James, and those for Lady Talford to Mr. James and Mr. Snare. Mr. Forsyth's prizes for Mrs. G. Rundle were taken by Mr. Wheldal and Mr. Moxham. Only two seedlings were shown, and both received first-class certificates. One called Princess Beatrice, came from Mr. Wyneess, Buckingham Palace Gardens, and was a beautifully incurred purplish lilac flower, intermediate in colour between Lady Harding and Prince Alfred. The other, named Mrs. Sharpe, came from Mr. A. Forsyth; it was a large, deep rosy lilac flower, distinct and fine.

Messrs. E. G. Henderson sent a stand of blooms not for competition, containing among others Empress of India, Queen of England, Prince Alfred, and Prince of Wales, of extraordinary size; and Mr. Ware, of Hale Park Nurseries, Tottenham, exhibited three baskets filled with Saxifrages, Sedums, Scimpervivums, Echeveria scandula, variegated Polemonium ceruleum, and a variety of other plants, the whole arranged so as to produce an excellent effect. From Mr. Shirley Hibberd came a collection of Ivies, and from Mr. Forsyth and others miscellaneous groups of Chrysanthemums.

THE CHILWELL NURSERIES.

(Concluded from page 331.)

ANOTHER span-roofed orchard-house, 60 feet long by 20 feet wide, though not of such an ornamental character as the last, was certainly not less useful. Besides a number of Peach trees in pots, it contained a few standards planted out in the central border, and among them a Royal George, which had borne about a hundred fruit. The tree was by no means out of bounds, although it had never been root-pruned. With regard to the pot trees, Mr. Pearson remarked (and he has since stated his views on this subject in pages 257 and 329), that he had given up autumn top-dressings on account of their involving the destruction of a portion of the roots near the surface, which are encouraged thither by the summer-dressing of manure and malt combs. In proof of the effect of this surface or summer-dressing in enticing and keeping the roots near the surface, he turned up several pots, and in only one were a few roots found protruding from the hole in the bottom.

A house of similar dimensions to the last is employed as a viney and pig-house. Here was growing the Black Muscat of Alexandria, or Muscat Hamburg, as it is more commonly called, on its own roots, also grafted on the Black Hamburg and on the Sarbelle Frontignan, a small, early, black variety, which Mr. Pearson did not consider worth retaining in the viney. The result has been that though the Vine worked on the Sarbelle Frontignan is extremely vigorous, and has made wood of extraordinary thickness, neither the bunches nor the berries are so good in size and appearance as those produced by the Vine on its own roots, which, it may be remarked, is a vigorous one, that in some years has yielded 40 lbs. of Grapes. The Vine on the Black Hamburg stock exhibited a considerable difference in the character of the foliage: the bunches were larger and longer, and the berries were likewise improved in size and regularity, and were of excellent flavour. It may have been imagination, or the effect of tasting other Grapes, but it appeared that the Muscat flavour was slightly, though in a very slight degree, less strongly marked in the produce of the worked Vine than in that of the Vine on its own roots; but after several tastings the attempt to distinguish a difference had to be given up. However, whether such exist or not, there is little room to doubt, from the experience at Chilwell and Dalkeith, that the Black Hamburg is an excellent stock for the Muscat Hamburg. The subject of stocks, not only for Vines, but for other fruit trees as well, is deserving of a greater amount of attention than has hitherto been bestowed upon it, and discussion and extended experiments would, doubtless, bring to light many valuable facts hitherto hidden altogether, or known only to a few. Among several other varieties of Grapes were the Alicante, bearing very heavily, and Trentham Black, another excellent late Grape. No border, scarcely, could be more unpromising than that on the outside of this house. It was not more than 8 or 9 feet wide, lay between houses, being, therefore, considerably shaded, and consisted of a stiff red earth, mixed with lime. Little, if any, pains appeared to have been taken in its making, and yet the Vines bore well and were more healthy than others in cases where great expense has been incurred in border-making. With a border of such a description, and the roots not so near the surface as desirable, slanking might have been expected: but very few of the Grapes were so affected, and this Mr. Pearson ascribed to his being careful not to over-stop the Vines. The excessive removal of foliage he considers a far more frequent cause of slanking than bad borders.

A lean-to viney, 34 feet by 16, the first-built of the houses at present existing in the nursery, and that some thirty years ago, contained in the two divisions of which it consisted Purple Constantia, Red Frontignan, Alicante, Black Hamburg, Royal Muscadine, and Chasselas Rose Royal, bearing well, and some of the bunches were very good. The next houses were four span-roofed structures, ranging from 36 to 42 feet in length, and from 10 to 13½ feet in width. These are amply provided both with top and bottom heat, and seem to be very useful for a variety of purposes, such as growing Cucumbers, and sheltering seedling bedding Pelargoniums, Vines in pots, and other subjects; they are likewise employed in turn as propagating-houses. Two of them had been just cleared out and sulphured, having been cropped with Cucumbers, of which frequently ten dozen had been cut in a morning to send to market. A small orchard-house, 40 feet by 20, was filled with seedling Peaches and Nectarines, of which Mr. Pearson believes he has obtained some desirable varieties. Other two houses, 46 feet in length and 13 and 11 feet in width, were respectively filled with Vines in pots and young Conifers, among which were between three and four thousand Chinese Janipers, that being about the number propagated every year.

A small span-roofed house, 26 feet by 12, is used for raising seedling Rhododendrons. Formerly, when these were out of doors, many perished, owing to their being deluged with rain or exposed to strong sun; but Mr. Pearson, reasoning that the seedlings under natural conditions come up under trees, and are, consequently, shaded from sun and to a great extent sheltered from rain, had this house specially constructed, and dilled the glass. The result has been that the seedlings come up by thousands, and with scarcely a failure. In connection with Rhododendrons, Mr. Pearson remarked that instead of side-grafting, as usual, which he objects to on account of the Rhododendron peticum stock not growing equally fast with the vigorous kinds worked on it, he saddle-grafts in spring; and although the failures are numerous, the plants propagated in this way are much better, being feathered to the ground. Of this there was abundant evidence in the beds on the lawn, where Alarm and some other kinds which are usually leggy, were as bushy as could be desired.

The conservatory, which is the last structure to be noticed, is 60 feet long by 21 feet wide, and, as might be expected in the beginning of September, was not crowded with a number of plants in flower, but it contained a fine stock of Camellias, remarkable for the thickness of the wood which they had made and their luxuriant foliage, and this even in the case of weak-growing kinds, such as Sarah Frost and Fimbriata. Besides a noble plant of the Double White, upwards of 6 feet in height and nearly as much in diameter, and a fine specimen of Countess of Ellesmere, there was a fine stock of the leading varieties worked in the spring of the present year, the mode adopted being saddle-grafting, which Mr. Pearson prefers to whip-grafting and other methods, as being more certain and furnishing stronger and straighter plants. The whole stock is grown in fresh turf soil, and otherwise managed as described vol. x., pages 159, 160, and certainly more healthy, vigorous plants of the size could nowhere be found. The shoots were unusually thick, but well-ripened, and the leaves large and of that glossy dark green which makes a Camellia, even when out of bloom, one of the most ornamental plants in a conservatory.

It has been remarked that some of the houses are partly employed in winter for sheltering seedling bedding Pelargoniums. These are raised by thousands, and destroyed to nearly the same extent after selecting the most promising for propagation. Mr. Pearson has tried a very large number of crosses, and has found that when a green-leaved Zonal Pelargonium is crossed with a Variegated Zonal variety, some of the progeny will come up green-leaved, whilst in others the leaves will be variegated, but that afterwards the green-leaved seedlings often become variegated, and when this takes place are quite as good and sometimes better than those which are variegated at first. He has also arrived at the conclusion, that if variegated kinds are used as the female parents, the majority of the seedlings will be of bad constitution, many of them proving albinoes, or nearly so, and, therefore, for the most part dying off, but that some of the progeny of such crosses prove to be fine tricolored varieties.

Although the seedlings had been severely weeded out both before and after propagation, a considerable number of varieties still remained, constituting one of the most interesting features at the Chilwell nurseries. Of the Variegated Zonal varieties, one called Walter Pearson was very conspicuous by

its beautiful and distinctly coloured leaves, and is certainly one of the finest of the Tricolor section. Edith Pearson, again, is another beautiful kind, remarkably compact in habit, and with flat leaves and a brilliant-coloured zone. For small beds and the edgings of large ones this variety is most desirable, and when better known will, no doubt, become very popular. Sir Robert Peel with a very broad richly-coloured zone, Ben Hine in the way of Sophia Dumaresque, and Waverley, are also very fine; the last-named was even superior to Sophia Dumaresque, judging from the two grown in juxtaposition. The Second Mrs. Balwidda, which, however, is not of Mr. Pearson's raising, is another promising kind with a fiery zone. Of the Bronze and Gold section, Bronze Perfection, remarkable for the regular outline of the leaves, and Queen of Bronzes for its fine bold foliage, are varieties of decided merit, besides which a very pretty seedling, called Autumn, was growing in a bed on the lawn, and in a frame with others two promising seedlings, one raised from Flower of Spring, and another from Italia Unita. Pearl, of which the foliage is variegated with white, but having a dark zone breaking through between the green and the white, formed a pretty bed, especially where allowed to produce its soft-coloured light cerise flowers.

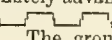
Among hybrid Nosegays, two of the most conspicuous were Chilwell Beauty, partaking of the character of Amy Hogg, and having fine trusses of large magenta flowers, and Alfred Pearson, very free-flowering, and having unusually large trusses of cherry rose-coloured flowers. The leaves are marked with a deep zone. Chevalier Bayard is another hybrid Nosegay, with fine trusses of flowers nearly of the same colour as Stella, but far superior in shape. This seems to be an admirable kind for bedding. As a free-flowering bright orange scarlet kind William Ingram is likewise excellent. Besides the above there were numerous other varieties grown in small beds for trial, and several of which exhibited considerable merit, though not equal to the kinds named.

A lawn and beds adjoining Mr. Pearson's residence, altogether about an acre in extent, besides Pelargoniums grown for their foliage and flowers, was planted with choice Conifers, conspicuous among which were two fine specimens of Arbor Vite, Wellingtonias, Cupressus nutaensis, not with horizontal branches as so commonly seen, but with these ascending, and Cupressus Lawsoniana 10 feet high and $4\frac{1}{2}$ feet in circumference round the stem at the ground. It was planted in 1858, and withstood the severe frost of 1860, although plants of the same species were killed in other places in the neighbourhood, owing, probably, to a less hardy variety having been distributed. As a further proof of the hardness of this fine Cypress it may be remarked that near Nottingham the thermometer fell in that winter to 13° below zero, and old Oak trees and 10,000 Roses were killed.

The general stock, which is distributed over several nurseries, is very large. Of Chinese Junipers there is one of the largest stocks in the trade, the plants being of various ages and in fine health. Thuja aurea, Golden and Irish Yews, together with the most desirable Conifers and Taxads are also extensively grown, as well as Golden Hollies, Rhododendrons, and other shrubs, and ornamental and forest trees. Among the latter was an Elm, remarkable for the straightness and rapidity of its growth. In a short avenue the stems of some trees of this Elm, though only planted thirteen or fourteen years, measured at between 5 and 6 feet from the ground 6 feet 5 inches and 5 feet 9 inches in circumference, whilst those of Ulmus americana and campestris only ranged between $2\frac{1}{2}$ and 3 feet in girth. Trees of it cut down in the Marquis of Exeter's park, at Burghley, were found to have made twice as much timber as the common English Elm. It is known at Chilwell as the Siberian Elm, and all the stock was originally obtained from the layers of an old stool which existed there in Mr. Pearson's grandfather's time.

The permanent orchards, 74 or 75 acres in extent, offered several features of interest, not the least remarkable being the difference in the growth of the trees where the upper layer of the new red sandstone comes near the surface, which it does in one orchard. Prune Damsons, Damsons, and White Bullaces were being gathered by hundreds of bushels; and of Pears there were several gigantic trees, some of them bearing heavy crops. Thus, Marie Louise in one orchard was worked on a Warden Pear tree measuring between $4\frac{1}{2}$ and 5 feet in circumference of stem, and some 40 feet high. Beurré de Capiaumont, likewise worked on a large old tree, was about 50 feet high; and of the old Grey Beurré there were several very large trees bearing heavily. The Crawford had borne a very heavy crop;

and Aston Town and Beurré d'Amanlis were loaded with fruit, the latter doing better as a standard at Chilwell than any other of the continental varieties. Walker's Summer Broadend Apple, said to be a very useful kitchen variety, was also bearing very abundantly; so, too, was Prince Englebert Plum, which is excellent both for dessert and kitchen use. It is especially useful for pies and tarts, yielding an abundance of highly coloured juice, without the astringency of the Damson.

The nursery where the young fruit trees are grown for sending out occupies a piece of ground sloping a little towards the south, and fifteen acres in extent. To keep out the game which abounds in the neighbourhood, and which proves very destructive, Mr. Pearson surrounded it with a low $4\frac{1}{2}$ -inch brick wall set in dolomite lime. This wall is without buttresses, but to give it strength to resist the wind it is built in lengths of 10 yards, alternately advancing and retreating in the annexed fashion—, the short cross wall being only a yard in length. The ground is intersected by a broad road through the middle, and subdivided into pieces of convenient size by paths at right angles, with gates in the wall at the ends of all the principal paths. Here there is a large and healthy stock of the best varieties of Apples, Pears both on the Quince and Pear stocks, Peaches, Apricots, Plums, Cherries, and other fruit trees, and the wall space is taken advantage of for training trees in various forms. To prevent mistakes, and for reference when names become lost, Mr. Pearson has planted two trees of every variety of fruit tree—a precaution which, if more generally adopted, would obviate much of that confusion which unfortunately still prevails in the naming of fruits.

Long as this notice has been, there is much besides at the Chilwell Nurseries to interest the horticulturist, but which for the present at least must be passed over; but the gardener and amateur who may visit the nurseries will find in Mr. Pearson one who, in addition to a genial hearty manner, possesses a fund of information which he is ever ready to impart.

Mr. Foster's extensive works at Beeston, where all the wood-work of glass houses is cut out by machinery, so as to fit together with great accuracy, are also well worthy of a visit. The machinery for cutting mortices, bevils, planing, &c., is very interesting. Mrs. Foster, it may be added, is very successful in managing, with very little assistance, a conservatory in which, besides Black Hamburg and Royal Muscadine Vines bearing an excellent crop, there were some fine specimen Camellias, such as Beali 5 feet high, Reticulata 7 feet high, and Mathotiana 6 feet high, though these were not more than seven years old from the graft. There was likewise a fine plant of the Double White in an 18-inch pot, and some smaller plants had made shoots nearly 2 feet in length in the year.

THE CYLINDER VINERY.

If I mistake not, some hints respecting a structure under the above name have appeared in your columns; no detailed description of it has, however, been given. The same ingenious gentleman who invented the ground vinery, has by a happy thought projected this economical and admirable structure for the cultivation of Grapes; and to prevent his invention being pirated and patented by some little extra work being added to it, of no utility except to form the groundwork of an application for a patent, he has made his cylinder vinery a patented invention.

A month or two since a hexagonal cylinder vinery was erected in the nurseries at Sawbridgeworth, under the sanction of the inventor, by Mr. T. F. Rivers, and so simple is the structure that it was put up and completed by twelve o'clock of the day it was commenced. This structure is, indeed, so simple as to be difficult to describe; but, as was said the other day by an amateur from a distance, it is worth a day's journey to see. The hexagonal form is that which I shall attempt to describe, but these vineries may be built with eight or ten angles, or even more, if a greater number of Vines is wished for, the number of angles determining the number of Vines that can be planted in a vinery with advantage, the hexagonal cylinder allowing space for five, the octagonal for seven, and so on.

The hexagonal vinery I have alluded to is built with six slight posts of the best Fir timber, 3½ inches by 1½, standing 9 feet out of the ground—10 feet is the height suggested by the inventor. These posts are firmly fixed in the ground by ramming, and attached to each other by strong galvanised wire passing through them. They are placed at angles so as to form

the shape above mentioned, and 2 feet apart; each post is grooved so as to admit of pieces of glass 24 inches wide sliding down edge to edge, no putty being employed, so that what is called the glazing is the work of a few minutes. In each of the five spaces between the posts a Vine is planted, and supported by wires stretched from post to post. The remaining space on the north is occupied with a door for entrance to the interior of the cylinder, which in the present instance is formed of painted calico on a light frame, but it may, of course, be made with thin boards.

My description of the cylinder vinery is, I fear, very lame; but the accompanying illustration, in which the door is represented open and the Vines in pots, will, I think, give your readers an idea of its appearance.



A hexagonal cylinder vinery is exactly like a six-sided transparent sentry-box, from 9 to 10 feet in height. There is, however, one peculiarity which makes the structure and its application perfectly original, it has no roof and no ventilation below, the glass touching the ground. This at first sight seems perfectly incongruous, and as if it must be fatal to healthy growth; it is, however, not so, for Vines and other fruit trees grow with extraordinary healthy vigour in these cylinders, the current of cool air in sunny weather constantly descending and displacing the heated air.* The temperature of the cylinder vinery at Sawbridgeworth has been accurately tested, and found to be in shade in sunny weather 10° above the shade temperature of the open air. This was ascertained in September, it is quite probable that in sultry weather in summer it would exceed that.

The open roof by admitting rain and dew seems to be the grand discovery, the *arcane magnum*, of the cylinder vinery, and much credit is due to the inventor for the clever thought, thus saving amateurs the trouble of syringing and watering. The great charm of this unique invention is, that every garden 10 or 12 feet square, with a southern aspect, may have a vinery with five or more Vines growing and bearing in it, for a trifling sum—say 40s. or 45s. I may add, that the patentee intends to supply the posts kyanised, so as to last for half a century; the supporting wires and slight connecting iron-work will also be supplied, and I hope shortly advertised. It is proposed by the inventor to throw over the top of the cylinder in May, if spring frosts are rife, a piece of frigi-domo or canvas, allowing it to

remain night and day till the end of the month, but the cylinder to be open at top all the summer and autumn.—FRONTIGNAN.

CHRYSANTHEMUMS.

MR. SALTER'S NURSERY, HAMMERSMITH.

The display here is always so extensive and good that no cultivator of the Chrysanthemum would willingly miss paying the Versailles Nursery a visit at this season, especially as there all the best of the old varieties are to be found, whilst the novelties to be sent out next year with but few exceptions emanate from Mr. Salter's establishment. This year, however, the show-house is scarcely so gay as usual, owing to many of the varieties not having as yet attained the perfection which they will do a week or so hence, the unfavourable autumn having retarded the bloom here, as elsewhere. Of the older varieties, Little Harry, St. Patrick, Mr. Brunlees, and Golden Beverley are at present remarkably fine, and the names of many more might be added, as being now nearly in perfection. Among the newer kinds, Dr. Sharpe, very dark crimson, is exceedingly showy; Fingal, rosy lilac, though not yet in perfection, is of a pleasing rosy lilac colour; and as an orange and amber-coloured flower, Dr. Lindley is also very fine. Lady Talfourd, both in and out of doors, is one of the finest of the rosy-lilac coloured varieties; and Prince of Wales is too generally recognised as one of the best varieties sent out of late years to need comment. Isabella Bott, very large, bluish; Prospero, dark purplish violet, very full; Venus; Mrs. Rundle; and Mrs. Heale, the last a pure white sport from Princess of Wales, are also remarkably fine.

Many of the new kinds yet to be sent out are not sufficiently advanced to display their qualities, but of those which are, the best are Lord Derby, very dark purple; Princess Beatrice, the fine variety exhibited by Mr. Wyness, at Stoke Newington, and which is to be sent out by Mr. Salter; Golden Orb, large, canary-coloured; Baron Beust, finely incurved, chestnut, turned up with yellow, very fine; and Captivation, carmine shading off to white, very showy, and likely to make a fine specimen plant.

Mr. Salter has added about 40 feet in length to that part of his show-house which is at right angles to the entrance, and has here a collection of Chinese and Japanese Chrysanthemums, many of which would prove very ornamental for conservatory decoration. Such are Madame Godillot, reddish orange with a yellow centre; Meteor, yellow tipped with orange; Aurantium, very large, yellowish orange; Red Dragon, red with yellow spots; Stella Mirabilis, not out, but curiously spotted with yellow; The Tycoon, red backed with yellow; Aimee Nanrel, white edged with rose; and The Wizard, deep maroon. There is also an unnamed seedling which produces a profusion of pale lilac and white flowers in long succession.

A beautiful little collection of Sedums and Saxifrages near the entrance to the show-house cannot fail to attract attention, and in another house, as well as out of doors, there is the splendidly-coloured Chilian Beet, which was much noticed when exhibited some time ago at South Kensington. Dahlia imperialis, a new kind which has not as yet bloomed in England, is planted in the centre of the show-house, and is expected shortly to produce its bell-shaped white flowers. Among other plants *Centaurea magnifica* was noticeable for its large, beautifully cut foliage.

MR. FORSTH'S NURSERY, STOKE NEWINGTON.

In the show-house at this place there is a fine bank of Chrysanthemums, among which are most of the leading kinds, though all are not as yet fully out. There are, however, fine examples of Dr. Sharpe, Lady Harding, Mrs. G. Rundle, pure white; Prince of Wales, Alfred Salter, General Harding, Cassandra, Golden Beverley, Gloria Mundi, Queen of England, Jardin des Plantes, John Salter, very fine; Princess of Wales, Mrs. Halliburton, Empress of India, St. Patrick, Sam Slick, Virgin Queen, pure white; Orange Perfection, Mr. Brunlees, Hercules, red; Lady Talfourd, General Bainbridge, and many others. Anemone-flowered varieties, as Gluck, George Sand, Prince of Anemones, Lady Margaret, Marguerite d'Anjou, &c., are also well represented.

As a specimen plant, Mrs. Sharpe, deep rosy lilac, is fine, and for this purpose will probably become a favourite; of Prince of Wales, General Bainbridge, Alma, Christine, Lady Harding, and Vesta, there are also finely-grown plants.

Of Pompons, there are handsomely-grown plants of the dif-

* The experiment to determine the upward and downward currents of air was carried out by Mr. T. F. Rivers with Thistle down. The descending current of air was found to occupy the centre of the cylinder, the upward currents of warm air the sides.

ferent kinds of Cedo Nulli, Duruflot, La Vogue, Andromeda, and White Trevenna, which last is especially remarkable for its free blooming; Prince Kenna is also pretty. Some of the best of the Pompons, however, are not yet in bloom. These are chiefly in a span-roofed range 300 feet in length. In the same range there is also a large stock of Mrs. Pollock and other Variegated Zonal Pelargoniums, together with numerous varieties grown for their flowers; likewise Fuchsias, Cinerarias, Genistas, and other spring-flowering plants.

THE TEMPLE GARDENS.

This year Mr. Broome's long border is even better than usual, and he has been successful in bringing his plants into good bloom sooner than most people, notwithstanding the cold dull weather which has prevailed for some time in London. He has about two thousand 16-sized pots plunged in his main border, the bottom of each pot resting on a thumb-pot inverted, so as to prevent the drainage becoming choked; and to this he attributes a great measure of his success in the present year. The plants were also potted very tightly in sound loam mixed with one-third part of manure, and further supplied with manure waterings. Prince of Wales, Mrs. George Rundle, Venus, Little Harry, White Globe, Jardin des Plantes, and Hereward, are the most conspicuous for their size and beauty, and next to them come Cherub, Beverley, Antonelli, Alfred Salter, Virgin Queen, Dupont de l'Eure, Mrs. Halliburton, Hercules, Golden Beverley, Bernard Palissy, Mr. Gladstone, Rifleman, Mrs. Cunningham, St. Patrick, Garibaldi, Astrolabe, Cardinal Wiseman, Anaxo, Sam Slick, and Lady Harding.

Mr. Broome has also neat beds of Pompons on the lawn, containing the different kinds of Cedo Nulli, Hélène, and Salomon. Madame Eugène Domage and White Trevenna are also very good.

Mr. Dale, of the Middle Temple Gardens, has also a good display of some of the large-flowering varieties, and several showy beds of Pompons.

SWINDLING.

Will you caution nurserymen against a rascal who is going about the country victimising them under various pretences? He came here on Wednesday last, giving the name of W. H. Young, describing himself as gardener to F. G. Harris, Esq., Harrow Park, and ordered between £200 and £300-worth of nursery stock, and borrowed a sovereign of our Mr. Ingram, as "he had been out longer than he expected, and had run short." He also got from our clerk a dozen of our catalogues to distribute, as he said, amongst brother gardeners in his neighbourhood who were plauting; but, unfortunately, we fear he has used them to dupe Mr. J. Cole, of Aston Lane Nursery, Birmingham, to whom he had the unparalleled audacity to pass himself off as the son of our Mr. Ingram, and to buy in the name of our firm £161-worth of plants, and had the cool impudence to write to Mr. Ingram as his "dear father," asking him to send a draft for £163 instead of £161, as he "has laid out his cash." Doubtless the marginal £2 he would get of Mr. Cole.

His great point is that he wants nothing to be sent off, nor even taken up, till the cheque is received, and then he obtains a pound or two in the ways we have named, when he is immediately off to some other place. Of course, if he can only manage two or three of us per day it keeps him very jolly. He is about 5 feet 7 or 8 inches high, of dark complexion and whiskers, and has lost his front teeth.—WOOD & INGRAM, *Hunt-ington Nurseries*.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Cabbages, let all plants still remaining in the seed-beds be pricked-out forthwith. Now that winter is near, it is of importance to have a stock of keeping roots at hand in the vegetable shed. Carrots, Parsnips, Turnips, Jerusalem Artichokes, Horseradish, Beet, Scorzonera, and Salsafy should be at hand here. If the vegetable-shed is, as it ought to be, several feet below the ground-level, and possessing a close-fitting door, the above vegetables may be merely laid in heaps. If they are apt to shrivel, things of this kind will be better in layers with clean sand. If there is any spare time plant *Horse-radish*, *Sea-kale*, and *Rhubarb* now, instead of in spring. In all these cases be sure to trench deeply and loosen the bottom

of the trench. Some Early Frame *Radishes* may be sown in a week or so.

FRUIT GARDEN.

Proceed with planting and pruning as previously directed. Trench and ridge-up ground, leaving the surface as rough as possible, in order that a greater surface may be exposed to the action of the weather. A piece of ground well trenched and the surface laid-up in ridges will be fit for cropping, in the event of a wet spring, much sooner than if the surface were now made level and smooth. Fruit-tree borders should be ridged in order that the water may be carried off, and special care should be taken that water do not lodge about the stems of the trees, near which, on this account, the furrows between the ridges should be more shallow than at the farther side of the border. Where fruit is so situated as to be affected by the daily changes of temperature, air must be freely admitted, but presuming that the most choice kinds are placed in boxes or close drawers, and, consequently, little affected by vicissitudes of temperature, they need only be exposed when occasional inspection renders it unavoidable.

FLOWER GARDEN.

Annuals and herbaceous plants killed by frost should now have their stems cut off and taken to the rubbish heap; the most choice kinds should be labelled to prevent them from being destroyed when digging the borders. Take up the roots of *Lobelia splendens*, *propinqua*, *fulgens*, &c., and store them in a frame or boxes filled with earth. They may be placed in any spareinery or Peach-house until they require parting in spring. The great object to be kept in view is to prevent them from damping-off in winter. Continue to sweep lawns and walks until they are free from leaves, in order to make the garden look well in winter. Seeds not yet collected should now be gathered on a dry day. After so fine an autumn, during which period all bulbs have been placed in the ground under favourable conditions, we would advise that every bed of Tulips, however small, should be properly and substantially hooped over, so that by covering with a number of Russian mats sewed together the whole length and breadth of the bed, or beds, the collection may be safely defended from an excess of either rain or frost. Most amateurs were taught a severe lesson last season, the serious effects of which on their most choice bulbs will be felt for some time. Beds of choice Pansies ought also to be protected, and in mild weather traps should be set for snails, which even at this season will do great mischief. Carnations, Picotees, and Auriculas should be kept clean, and the soil in the pots must not be allowed to become saturated with wet; in fact, the less water the better, compatible with health.

GREENHOUSE AND CONSERVATORY.

The winter-blooming *Correas*, *Epacris*, *Polygalas*, *Acacias*, *Pimeleas*, &c., will now begin to make a charming addition to the other inmates of the conservatory. Take care to give every attention to judicious watering, more especially to such as the *Epacris*; it will not do to trust this operation to inexperienced persons. Let all bulbs beginning to start, such as the *Amaryllis* tribes, the *Lachenalia*, *Oxalis*, with others, have very moderate supplies of water until the leaves are somewhat expanded. If any of the stock appear too much crowded, endeavour to weed-out inferior or half-hardy plants, transferring them to the pits or frames, or if no better shelter is to be had, to a shed or outhouse, provided they are of the hard-leaved class or decidedly deciduous. The *Pelargoniums* intended for early blooming should now be stopped, and plenty of room must be afforded them. Let them be tied out, and as soon as they begin to break let them be repotted and their growth slightly encouraged, always keeping them near the glass. As this is rather a leisure time in this department, much work might be forwarded before the arrival of a more pressing season, and among other things the naming of plants commands our attention. A collection of plants badly named loses half its interest. When they are neatly labelled and the names accurately written and spelt, it is a clear proof that some attention is paid to them. The proprietors of plant establishments are not expected to be able to identify all the plants in their collections, but they expect, and rightly, that their gardeners will readily afford them the opportunity of doing so. The compost-yard is most important. We do not wish it to be inferred that we are an advocate for complicated mixtures, being well assured that such will not of themselves produce any great results without attention. We must still, however, urge the securing of a little loam and some other materials in the compost-yard. At this period one of the most

important points in this department is to see that the drenching autumn rains have every facility for escape. The best of soils will become soured in a very short time by the lodgment of stagnant waters. A good compost-yard on this account should be on an inclined plane, and the soils or composts should invariably be laid in parallel ridges with their length in the direction of the descent. Those who have not collected their loam should lose no time in doing so.

STOVE.

Continue to attend to former directions, hardening growths, and endeavouring to maintain a quiet atmosphere, somewhat dry. Keep down all unnatural night heat.

PITS AND FRAMES.

Cuttings put in late must now be sorted, and all that are rooted should at once be removed to another pit or frame where they can have more air to harden them off before the cold sets in; those not rooted should be replunged and kept close until they have become rooted. Admit air as directed in former calendars. Scarlet Pelargoniums taken up from borders will keep well over winter if they are laid in sand or soil beneath a greenhouse stage. In spring they might at once be replanted in the borders without repotting, if the operation be performed in gloomy weather. Ferrara roots also keep better in this way than in any other, but traps must be set for mice, which are very fond of the roots. In fine weather, when the lights are off, look carefully over all free-growing plants and pinch out the tops of the shoots to keep the plants dwarf and bushy; also, remove dead and damp leaves. Give air freely night and day while the weather is mild, keep the plants moderately dry, and merely exclude frost. Do not give water until the plants actually flag, and then in the morning of a fine day.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Endive.—A good part of the most forward we have left out of doors, and so that we can throw litter over it in severe weather. We blanch it beautifully as wanted, by covering a yard or two at a time with long grass, with or without a rough frame or hurdle for the grass to rest on. We like this plan better than tying, or covering with slates, tiles, or boards over the plants, though any plan that excludes light will do. They will come beautifully white if taken up and set thickly in a dark room, closet, cellar, or Mushroom-house. Where there is a close shed with windows, a fine supply can be kept easily all the winter, giving air by opening the door in fine weather, and the light will keep the plants from blanching much; enough can then always be had in first-rate condition by covering a yard or two at a time with a mat and a little litter. Endive and Chicory can never be had better than from a dark cellar, &c., but then, if much is put in, too much will come in at once, and if the plants become over dry the leaves will lose their crispness, and if the soil be moist or the cellar floor very moist, the leaves will begin to damp some time after they are blanched. Much the same remark applies to a dark Mushroom-house. The heat will bring on the green Endive to be soon fit for use, but they do not keep long after they are fit. When there is no convenience except open-ground treatment, it is best to grow plants on ridges to secure dryness, and have litter to protect in severe weather, and clean litter or other covering to blanch as wanted. A common earth-pit will be a great help in the way of making protection easy, but unless rains can be excluded the plants will suffer more from damp than they will suffer from frost on ridges. Some methods must be tried to secure such salading in winter, unless where pits and frames are ample enough in extent to supply a daily allowance of Lettuces, and even then a little of the whiter Endive makes the greener Lettuce all the prettier to the sight, if not preferable to the palate.

Lettuces.—Took a good many full-grown and half grown, with balls into an earth-pit, protected by some old worn-out sashes, and have pricked out a lot of young ones under a slight protection and in the open air, mostly thickly for transplanting or moving every other one in the spring, if they stand well. Threw ashes over young plants in beds, &c., as the young ones often stand best. For all such pricked-out plants and seedlings, we have long found that the plants stand in proportion to the less growth they make in the first part of the winter, and for insuring this more stunted growth, nothing is more effectual than a comparatively hard soil. In sowing, therefore, and

pricking out in autumn, and even now, it is advisable not to dig the ground or give it any manure, but merely prick it over a couple of inches deep or so on the surface. For the plants left without transplanting the ground may be forked between, and mulchings if needed given in spring. These, however small, will be forward enough for us, more especially as a few rows of small plants, in the front of the later orchard-house, will come in when the supply of winter Lettuce and Endive is becoming short. These would come on earlier with the protection of a glass covering, and Lettuces and Endive could be kept for winter use; but we should want to cover these larger plants in frost, as unless that is very severe we like to leave the ventilation on, to keep the trees as late as possible from blooming.

Turnips.—Took up a lot of white and placed them on a hard piece of ground thinly in the open air, and covered with a little litter. We question if there is any better mode for keeping them crisp, and without growing. A little wet passing through the litter will not spoil them, so long as the layer is thin, and there is no chance of their heating. If kept in a dry shed, their juices evaporate. Wherever kept—in shed, heap, or pit, it is important that the heap should not be large, as they are apt to heat when shut up, and that not only destroys flavour but encourages decay. Those about 1½ inch in diameter now, will scarcely pass the winter in the open air, if the frost should be severe, and if from 3 to 4 inches across they will be better up than left in the ground, however mild the weather.

Beet should also now be housed without delay, as a sharp frost will injure it. When the roots are somewhat dry, they may be packed in dry sand. When we have been scarce of that, or of dry earth, and wished to husband room, we have built it in a heap, with a layer of Pea sticks, or other bare branches between. It is just necessary to prevent the heap heating. In taking up, avoid breaking the roots, and leave fully half an inch of the leaves, to prevent the bleeding that would take place if you cut too closely. We obtain very good Beet, and the roots not too large, by transplanting. From 1½ to 2 inches in diameter is quite large enough for salad use, and the darker the Beet the better it is liked, and the better it looks in the salad bowl, contrasted with the white of Endive and Celery. For a number of years we have found sowing in the open ground to be of no use unless we can protect the seed-bed securely with a net. As soon as the red leaves appear, they are cleared off by birds. These are just as eager to clear off every vestige of a seed-leaf of Prince's Feather, and Love-lies-bleeding, and yet they seldom touch seedlings of the Purple-leaved Spinach. We have never been able for years to depend on Prince's Feather, unless we planted it out when 2 or 3 inches in height, and then, like the Beet, the birds let it alone.

Swedish Turnips.—Put a barrowload in the Mushroom-house to produce blanched tops, also Sea-kale and Rhubarb roots, and will fill a frame, or part of one, with Asparagus directly.

Radishes.—We have put some protection over a bed, which will save us sowing for a week or two in a slight hotbed, as they are so much more apt to be leggy when sown in a little heat before the day has waned to its shortest. We sometimes think it would be as well to have a blank at times. Radishes every day cease to be the treat which they are in March to the man fond of them, who has had none for a month or two previously, and a Radish from a frame then has a flavour all its own. A crisp Cucumber on Easter Sunday can be no great treat to the person who can have one at table every day of the year; and having new Potatoes in December and January, must lessen the zest and relish which would otherwise accompany a good first dish in March and April. It is always well for the provider to have as much as he can; but it is neither wise nor prudent to supply any one thing to such an extent as to take away its relish, and make it be looked upon as of no particular value.

FRUIT DEPARTMENT.

See what was said on planting and general management in previous weeks' notices. In the dull damp days at the end of the week examined Grapes, and removed any damped berry, keeping the house as dry as possible, with air at back night and day, reducing it to a little in the evening, and giving air in front in fine days. In the first orchard-houses the leaves have been cleared from all the trees except Figs and Vines; the former are still ripening a few fruit, and the Grapes are mostly ripe and hanging well. We mentioned lately as a singular fact, that though the rats had their own share of a very heavy crop of Pears on bush trees, they had never troubled us in the orchard-houses, though they could have had something most

tempting. These houses have nothing but wood and glass in front, the half of the wood being a ventilator. Merely to save the splashing of wet on the boards, there is a row of bricks placed on the soil below the boards, and this single row of bricks has done us lately additional service. The line of bricks is continuous, unless where the post stands that supports the front of the house. About a week ago we found traces of the visits of rats all along this single row of bricks, and more especially at every opening where the post stood. There they had scratched vigorously, and had even attempted to nibble the oak post, but which with the brick at the side they found rather hard for them. They never seem to have raised their heads above the line of bricks, where they would have found softer material for their teeth in the one-inch deal board, which is a mere trifle for a rat to bore through when determined. Let our visitors should determine on this on a second visit, we trickled a little tar all along the outside of that row of bricks, and although we could trace the marks of their feet a foot distant from the bricks the next morning, there has been no scratching near them since.

ORNAMENTAL DEPARTMENT.

Went on planting, levelling, turfing, &c. We have only time to state, that in taking up and potting Roses, Lilacs, &c., as mentioned last week, and placing the plants in a slight hotbed, with the top of the plants exposed to the open air, the watering, and the little heat, had caused the buds to become so plump, that the birds found them, and cleared many buds, and we were obliged to put up some rough hoops, and place a net over them. It is rather tantalising to find that we can scarcely leave a bud uncaressed for, and then go into cottage gardens, and even large nurseries, and scarcely find a bud touched. The tomtit will now be our enemy, until he can obtain insects and caterpillars. —R. F.

COVENT GARDEN MARKET.—NOVEMBER 20.

SCARCELY any change has taken place here during the week, business being very unimportant, and the supply is adequate to meet the demands of all comers. In addition to other imports, we are now receiving some very good Oranges from Valencia and other ports. The crop promises to be very fine this season. Potato trade steady.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.		
Apples $\frac{1}{2}$ sieve	2	0	to	3	0	Melons..... each	2	0	to	3	0
Apricots doz	0	0	0	0	0	Nectarines doz.	0	0	0	0	0
Cherries lb.	0	0	0	0	0	Oranges 100	5	0	10	0	0
Chestnuts bush.	8	0	14	0	0	Peaches doz.	0	0	0	0	0
Currents $\frac{1}{2}$ sieve	0	0	0	0	0	Pears (dessert) .. doz.	2	0	3	0	0
Black do.	0	0	0	0	0	Pine Apples lb.	4	0	6	0	0
Figs doz.	0	0	0	0	0	Plums $\frac{1}{2}$ sieve	0	0	0	0	0
Filberts.....lb.	1	0	0	0	0	Quinces doz.	2	0	3	0	0
Cobs lb.	1	0	0	0	0	Raspberries .....lb.	0	0	0	0	0
Gooseberries .. quart	0	0	0	0	0	Strawberries lb.	0	0	0	0	0
Grapes, Hothouse..lb.	2	6	5	0	0	Walnuts..... bush.	10	0	15	0	0
Lemons 100	8	0	12	0	0	do. per 100	1	0	1	6	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes doz.	2	0	4	0	Leeks bunch	0	3	0	0
Asparagus bundle	0	0	0	0	Lettuce per score	1	0	1	6
Beans, Kidney 100	0	0	0	0	Minshrooms pottle	2	0	3	0
Scarlet Run. $\frac{1}{2}$ sieve	0	0	0	0	Must. & Cress, pnnnet	0	2	0	0
Beet, Red. doz.	2	0	3	0	Onions per bushel	3	0	5	0
Broccoli bundle	0	6	1	6	Parsley per sieve	3	0	0	0
Brs. Sprouts $\frac{1}{2}$ sieve	2	0	2	6	Parsnips doz.	0	9	1	6
Cabbage doz.	1	0	1	6	Peas per quart	0	0	0	0
Capiscums 100	2	0	3	0	Potatoes bushel	3	0	4	6
Carrots bunch	0	6	0	0	Kidney do.	3	6	5	0
Cauliflower doz.	3	0	6	0	Radishes doz. bunches	0	9	1	0
Celery bundle	1	0	1	6	Rhnharb bundle	0	0	0	0
Cucumbers each	0	6	1	0	Savays doz.	0	9	1	0
pickling doz.	2	0	0	0	Sea-kale basket	0	0	0	6
Endive doz.	1	0	0	0	Shallots lb.	0	8	0	6
Fennel bunch	0	3	0	0	Spinach bushel	2	0	3	0
Garlic lb.	0	8	0	0	Tomatoes.... per doz.	2	6	3	0
Herbs bunch	0	3	0	0	Turnips bunch	0	4	0	0
Horseradish .. bundle	2	6	4	0	Vegetable Marrows, dz.	0	0	0	0

TO CORRESPONDENTS.

N.B.—Many questions must remain unanswered until next week.

Books (*Amateur*).—"Science and Practice of Gardening" is by Mr. G. W. Johnson. You can have it free by post from our office if you enclose forty postage stamps with your direction. (*Rev. J. Raves*).—The work you name will be published early in next year. The epitome you mention would not be remembrance. We never heard even of the catalogue you name. There is none so good as Dr. Hogg's "Fruit Manual."

ROYAL MUSCADDINE VINE (W. W.).—From your description of the Grapes and their cracking, we think that your Vine is the Chasselas Musqué, sometimes called the Muscat Muscaddine.

NEW ZEALAND LAUREL (*A Constant Reader*).—We do not know a plant so named. Perhaps it is New Zealand Ten, *Leptospermum scoparium*.

SEWAGE AND TAN (J. B. K.).—The rich sewage and decayed tan would form a fertiliser more than equal to the same quantity of stable manure. If obtained in the summer and covered with a few inches in depth of the tan, the compost would retain nearly all its fertilising constituents until the winter.

ROSE STOCK (T. W. W., *Ballinasloe*).—"The specimen you enclosed is not the Manetti, but you use your Rose as a stock to bud on. You can move with care the Manetti-budded Rose that has started. Do not put the buds that are dormant under the soil. If the winter is severe a little straw, horse litter, or dry leaves over the buds would be of service. —W. F. RANCLYFFE." The woolly-head Grass is *Lagurus ovatus* or *Ovate Hare's Tail*. The other is too imperfect for identification.

MADDER PLANT CULTURE (C. L.).—The Dyer's Madder (*Rubia tinctoria*), is a native of the south of Europe. It is a trailing perennial increased by division, or by sowing the seeds. A sandy soil suits it, and in warm well-drained soils it is hardy in this country, but though its cultivation has been tried the result has not proved favourable. The seed should be sown in shallow drills about 1 foot apart, and the plants after they come up should be thinned out to that distance apart in the row. The seed may be sown in April, or the divisions of the plant may then be put in, and, being watered, will soon grow freely. The plantation must be kept clear of weeds, and in autumn have a top-dressing of rotten leaves or manure. In the third year the roots will be large enough for making into Madder. Unless your situation is warm, the soil sandy and well drained, we fear you cannot cultivate this plant profitably in England, and at the place whence your letter is dated it will require the protection of a frame in winter.

ROOM FOR STORING FRUIT (L. K.).—Your attic will answer for the storing of fruit, and it is well to have it on a north aspect. You could, and in fact ought, to have the room ceiled, which will maintain a more uniform temperature. A window may be made having shutters to take up and down, so that the room can be made dark at will. Fruit ought not to be frozen, but it cannot be kept too cool if only secure from frost. This may be done to some extent by straw coverings in severe weather.

FRUIT TREES FOR WALLS (*Idem*).—Your south wall, which we understand can be planted on both sides, will on the south aspect accommodate ten trees at 20 feet apart, and there we would have 1 Homeck Apricot, 1 Kaisha Apricot, 1 Moorpark Apricot, 1 Early York Peach, 1 Grosse Mignonne Peach, 1 Noblesse Peach, 1 Barrington Peach, 1 Violette Hative Nectarine, 1 Jefferson Plum, and 1 Cox's Golden Drop Plum. On the north aspect you may plant Morello Cherries 20 feet apart, and Currants at 4 feet apart. The west wall will hold four trees, and these may be—1 Marie Louise Pear, 1 Beurré Diel Pear, 1 Glou Morceau Pear, and 1 Ne Plus Meuris Pear. Against the east aspect wall you may have—1 Victoria Plum, 1 Green Gage Plum, 1 Kirke's Plum, and 1 May Duke Cherry. Against the walls of your house you may plant Apricots on the south aspect, Pears on the west, and Plums and Cherries on the east. We think the following Pears would succeed as pyramids:—Doyenné d'Été, Comte de Lamy, Beurré de Capiaumont, Prince of Wales, Seckle, Beurré Giffard, Louise Bonne of Jersey, Thompson's, Zéphirin Grigore, Citron des Carmes, Fodante d'Automne, and Beurré Sterckmans. Apples as pyramids:—Irish Peach, Kerry Pippin, Devonshire Quarrenden, Noncuch, Golden Pippin, Margil, King of the Pippins, Cockle Pippin, Ribston Pippin, Court of Wick, Nonpareil (Old), Keddleston Pippin, Adams's Pearmain, Braddick's Nonpareil, and Claygate Pearmain, all dessert kinds: Manks and Keswick Codlins, Lord Suffield, Kentish Filbasket, Gloria Mundi, Alfriston, Beauty of Kent, Norfolk Beefing, Royal Russet, Dmmelew's Seedling, Blenheim Pippin, Bedfordshire Foundling, and Northern Greening, all kitchen Apples. Of Plums you may have July Green Gage, Denniston's Superb, Kirke's, Jefferson, Woolston Black, Early Orleans, White Magnum Bonum, Diamond, and Prince of Wales. If you prefer Peaches to Plums on the south wall, you may have 1 Chancellor Peach and 1 Elrune Nectarine. Your soil is quite deep enough. It should be well drained and treached prior to planting. You cannot add too much turf to the soil, even if you go to the extent of putting it 6 or 8 inches thick at the bottom of every trench. You need not trench it deeper than 2 feet if you put turf at the bottom, which we would do and thereby raise the border, an excellent thing in your climate.

APPLES AND PEARS FOR ESPALIER TRAINING (W. L.).—Apples: Kerry Pippin, Summer Golden Pippin, Adams's Pearmain, Fearn's Pippin, Cockle Pippin, Collini, Noncuch, Margil, Braddick's Nonpareil, Nonpareil, Court of Wick, Downton Pippin, and Cox's Orange Pippin. Pears: Citron des Carmes, Beurré d'Amnais, Williams's Bon Chrétien, Louise Bonne of Jersey, Thompson's, Jean de Witte, Beurré de Capiaumont, Beurré Diel, Bergamette d'Esperen, Glou Morceau, Monarch, and Ne Plus Meuris.

VARIOUS PLANTS' TEMPERATURE AND COMPOST (*A Amateur*).—*Alocasia metallica*, A. Lowii, *Spherozyge latifolia*, *Phyllogathis rotundifolia*, and *Cyanophyllum magnificum* succeed well in a compost of very turfy sandy peat one-half, and light fibrous loam one-half, adding one-fourth each of leaf mould and silver sand, and pieces of charcoal from the size of a Pea up to that of a Hazel nut, the whole being well mixed. The soil should be chopped with a spade and made fine, but on no account sifted. It is essential that the pots be well drained. March is a good time to repot them, but you may repot earlier as your plants are in such bad health, and you should take care not to over-water them at this dull season. It will suffice if the soil be kept moist, and in repotting use a smaller size of pot, shifting again into larger sizes as the plants grow. A night temperature of 60° at this season is suitable, and from 65° to 70° by day. The first two are propagated by taking off the offsets in spring, and the others are propagated by cuttings early in spring and summer. The covering of the pots of *Alocasias* is sometimes done with sphagnum, which is to keep the soil moist, but they do quite as well without it.

EVERGREENS FOR BEDS (*Idem*).—Common Laurels, common tree, and variegated Box, Portugal Laurel, Rhododendrons, Aucuba, and almost all of the Firs, Pines, Thujas, Cypresses, Junipers, Cedars, &c. You will best tell what will suit you upon inspecting some nurseryman's stock. Hollies have no rival for such purposes.

GURNEY STOVE (*John Gould*).—We never heard of it before we received your letter.

ROSES (Inquirer).—We cannot ask the Rev. Mr. Radclyffe to answer your query. Apply to Mr. Rivers, Nurseries, Sawbridgeworth, Herts., for the Manetti stocks. The Pelargonium cuttings ought to root in the room you mention.

MITE IN AN ENTOMOLOGICAL CABINET (H. H.).—We suppose your cabinet of butterflies is kept in too damp a situation, or that the specimens were not sufficiently dried before being put in the drawers. We recommend you again to saturate the infected specimens with strong benzoic Collas and carbolic acid. If not then successful, they should, as a last resort, be put into a very close-shutting tin case, and placed for a short time in an oven.—W.

ARRANGEMENT OF TREES IN ORCHARD HOUSE—MUSHROOM BED IN A GREENHOUSE (Cosmos).—The distance between the pots in your lean-to orchard house must depend on the size of the plants. For small plants 3 feet will do, for larger plants more space will be required. With your 16-foot-wide lean-to house we would plant out against the back wall. There is great interest in growing trees in pots, and you can have a great variety in little space; and so you may when planted out if you adopt the espalier mode of training. We consider that planting out and training to a trellis is ultimately most profitable, and you could adopt that plan if you liked, and fill the spaces with pots in the meantime. The zinc sheeting will, if properly done, prevent drip from greenhouse plants doing injury to a Mushroom bed beneath the stage. Bank dung taken in will be apt to injure the plants. We have grown fine Mushrooms in such places; but if it was early in spring that we made the bed we left plenty of air on in a mild day, had the dung well sweetened, placed it down without much shaking, and as the bed was rarely above a foot in depth, beat it down, and covered over with an inch of soil. Very little steam would escape after this. When the heat was suitable we moved the soil with the hand, and inserted the spawn in the dung. In autumn we took the chance of a clearing and changing of the plants in the house, for making the bed, and replacing and renewing after the bed was made. If not, we took similar care to what we did in spring. We have grown Mushrooms in almost every conceivable place; but if the floor beneath the stage of a greenhouse necessitates the carrying on of most of the materials, we would prefer a close shed where a barrow can go at once. However, we have had fine gatherings under stages.

GERANIUMS OR PELARGONIUMS (Garforthian).—All the varieties formerly called "bedding Geraniums" are now called "bedding Pelargoniums." There are no Geraniums, in fact, to speak botanically correct, that are suitable for bedding.

FLOWER-GARDEN PLAN (A. B. C. Berks).—We do not plant gardens, we only criticise; but if you want to know where the Coleus will look best, then we would put it in the beds 9, 9, and you might surround it with Mrs. Pollock Pelargonium, or, which is better, with *Centaurea candidissima* or *Cineraria maritima*. Then, if you did that, you might plant 6, 6, with Mrs. Pollock, and surround it with *Iresine*. If Coleus will thrive, the four beds will be very fine. These circles, however, spoil the plan.

MUSHROOM-BED (Nemesia).—The materials used for the Mushroom-bed will be proper or not, just as they are rightly or improperly described. We would use no rotten dung for Mushrooms; but dung half decayed, and rather dry and fibrous, as may be obtained from linings and old hot-beds, not rotten, will answer well. We would use no soil from woodstacks, as it is apt to contain germs of many fungi besides Mushrooms. A thickness of 4 inches of cowdung is a great deal, unless well-dried previously. We insert the spawn before we cover with loam, and much depends on the state of the bed then: not too wet, nor too dry, and at the warmest not over 85°. With our materials of tree leaves, raw dung, rotten dung, &c., we would have proceeded thus:—We would have shaken out the droppings from the dung and a portion of the shortest litter. This we would have thrown into a heap at the present season to dry. We would have mixed the long fresh dung with your tree leaves, and allowed them to heat strongly in a heap, so as to expel slugs and kill spores of fungi. Of this for your shed we would have made a bed at least 14 inches deep, well trodden and beaten, and allowed it to remain for a few days; then we would have added 3 or 4 inches of the droppings, beaten firm, and watched the heat. As soon as this was safe we would have inserted the spawn, beaten, and left for a day; and if the heat was all right, we would have covered with half an inch of cowdung and 1½ inch of loam, and beat firm, and in a few days covered with litter to keep the heat regular.

ANGLE FOR VINEY ROOF (S.).—There is no better angle for the roof of a general viney than one of 45°, or a right angle; but in a lean-to, of course, you would have little or no front glass at that angle. We do not quite understand about the angle "per yard wide." The matter was alluded to lately. If we know better what you want we will do our best.

MARÉCHAL NIEL ROSE (G. S.).—The specimen sent I believe to be the true Maréchal Niel. There is no other Rose, except Isabella Gray, that could possibly represent Maréchal Niel. The bloom and truss sent appear to be the same as produced by Maréchal Niel sent to me by M. E. Verdier and Mr. Keynes. If 'G. S.' would send a truss early next season I could better determine the case. I have bloomed contemporaneously and beautifully Maréchal Niel and Isabella Gray. The points of difference seemed to me to be—Maréchal Niel is larger, thicker in petal, easier to unfold, larger in foliage, and apt, late in the season, to rot at the neck of the stalk. Isabella Gray is a little smaller, fuller, more golden, narrower in the leaf, longer in opening, and harder late in the season at the neck. An amateur, seeing them side by side here, told me that he could see no difference. A critical eye would see that the above distinctions were the difference. They were both lovely Roses, and I have bought twenty-five more of Maréchal Niel on its own roots, and three more of Isabella Gray. Both were bloomed here in the open garden.—W. F. RADCLYFFE.

PURPLISH-LEAVED VINES (J. P. O.).—The Vine with purplish or red leaves observed by you in the vineyards near Auxerre, in France, is the Teinturier.

THINNING LILY OF THE VALLEY-BEDS (Lillie C.).—Your beds, we presume, are very old, and the plants a complete mass. If so, thinning would be of little use. Your best plan will be to take up the whole of the plants and make a fresh plantation. The ground should be deeply dug, and have a liberal dressing of rotten manure and leaf mould worked in. If the soil be heavy a liberal dressing of sharp sand will prove beneficial. The beds are best 4 feet wide with one-foot alleys between them. Four rows may be planted in each bed, the two next the alleys 6 inches from

the sides of the bed, and the others 1 foot apart. The plants may be put in about 6 inches apart in the rows, and in small clusters of two or three crowns each. They should be so planted that the crowns will be just covered with soil. A top-dressing of well-rotted manure may be given, and it need not exceed an inch in thickness, and ought not to be removed, but the ground between the rows should be stirred in spring with a fork, and in summer any weeds that make their appearance should be removed as they appear, water being given between the rows during dry weather. In autumn the ground between the rows should be lightly stirred, and a top-dressing of rotten leaves given. Of course the plants' foliage will have decayed before this is done. In spring the soil about the plants should not be stirred, but the alleys may be neatly pointed over, any roughness on the beds being drawn off into the alleys. We think you will have a fine bloom the second year, and for half a dozen years to come. You may cut out spaces in your beds 1 foot wide, leaving a space of 6 inches, with the plants in it, between each, and removing the plants from the foot spaces you will have rows 1 foot apart. If you dig between the rows thus made with a fork, and work-in in the digging a liberal quantity of manure, leaf mould, or rich compost, we apprehend your plants will do better than now they are so very thick. The ground between the rows will be nearly filled by autumn with fresh runners, consequently it should not be stirred. A dressing of rich compost, or leaf mould, after the foliage decays, will be all you need give the plants.

PLANT TREES UNFRUITFUL (Idem).—If you were to remove the surface soil down to the roots and replace it with 6 inches of fresh turf chopped small, from a pasture where the soil is a rather light loam, it is likely the roots would be brought up into it. You may give a liberal top-dressing of manure upon the chopped sods, and we think the result will prove beneficial.

GLOIRE DE DIJON ROSE AGAINST WALL (Idem).—You may plant this Rose on its own roots against a wall, the ground being properly prepared by trenching and manuring. The ground about the stem and for some distance from it, may, early in December of each year, be mulched with littery manure.

RHODODENDRON EDGEMORTH CULTURE (X. Y.).—The culture of this splendid Rhododendron is not difficult. It should have, for the size of the plant, a rather large pot, which should be well-drained. A compost of turfy peat two-thirds, and one-third yellow loam will grow it well, silver sand being added if the soil be deficient of that material. Good peat being obtainable, no addition need be made. The compost should be torn in pieces with the hand, and made rather small, but it ought not to be sifted. In potting, the crown or neck of the plant should be kept rather high—that is, slightly elevated in the centre of the pot. Avoid potting whilst the soil is wet, as the compost ought to be made rather firm, and if this be done when the soil is wet it will be made a close, impervious mass. The plant cannot have too much air, or be kept too near the glass, and when it is making fresh growths the atmosphere ought to be kept humid but airy. Moisture and air are essential to a good matured plant. Liberal waterings ought also to be supplied, and at no time ought the soil to become dry. In winter the soil must be kept moist; in summer the plant should be copiously watered, but avoid making the soil sodden. Ferneries are much too close for Rhododendrons, for though revelling in moisture they delight in a well-ventilated atmosphere.

ERADICATING HORSERADISH (Hotspur).—The only plan to pursue is that you are practising—namely, to dig up every bit that presents itself, and never to allow the top to make any headway. Remove it as it presents itself, and by picking out all the root portion every time the ground is stirred, it will in time completely disappear. No amount of digging will remove it, for digging is nothing more than a means of propagation so long as the roots are left.

REMOVING FIGS (G. S. T.).—The fruit that remains upon Fig trees after the fall of the leaf usually drop off in spring when growth is renewed. There is nothing gained by leaving them on the tree; hence, any larger than a hazel nut we remove in autumn prior to covering up the trees for the winter; but all below that size are preserved, as they generally survive the winter, and they furnish the crop that ripens the following year, which is generally confined to those little larger than a pea in the preceding autumn.

NONPAREIL GAS BOILER (Fred.).—We know nothing of the gas boiler named beyond that stated in the advertisements.

BONES FOR VINE BORDER (Idem).—For your border, 12 feet by 2 feet 1 cwt. of braised bones will be sufficient. You ought to remove all the common garden soil to a depth of 3 feet. The bottom being wet, concrete it, and put in 9 inches of drainage, and make the border of sods, cut 2½ inches thick from a pasture where the soil is a good rather sandy loam, adding lime rubbish, charcoal, and bones; raising the border 1 foot above the ground level, it will be 3 feet deep.

REMOVING MOSS ON LAWN (E. S.).—The most effectual remedy for a mossy lawn is the removal of the greater portion of the moss with a rake during mild periods in winter, and in February giving a good top-dressing of rotten manure, which should remain until the beginning of April, when it may be well raked in with an iron rake. With an early prospect of rain sow, for an acre, 4 lbs. *Festuca duriensis*, 4 lbs. *Cynosurus cristatus*, 2 lbs. *Poa nemoralis*, 4 lbs. *Trifolium minus*, and 4 lbs. *Trifolium repens*, in mixture. After sowing roll the ground well and let the grass grow for a month, not mowing nor rolling for that time, after which roll and mow as usual.

CHRYSANTHEMUMS UNDER A NORTH WALL (Idem).—Chrysanthemums will not succeed under a north wall unless planted some distance from it, or the season is very mild.

QUASSIA FOR DESTROYING THRIPS (Dr. Foir).—A decoction of quassia chips will destroy thrips on the fronds of delicate Ferns; but it is not so effectual nor so safe as fumigation with tobacco.

PRUNING TREES AND SHRUBS (Idem).—The best season for pruning deciduous trees and shrubs is in autumn, or from that, during mild weather, until growth takes place in spring. Evergreens are best pruned in spring, a short time before they begin growing.

TREES TO PROTECT A GARDEN (A Hampshire Highlander).—Your garden being 600 feet above sea level on a chalky soil, you may plant Beech extensively, with a few Scotch Firs, and Larch and Evergreen Oak; but Spruce Firs look shabby on the windy side, and most others lean to the wind. The shrubs may be common Laurel, Box, Laurestinus, no Rhododendrons, but Berberis Darwinii and aquifolium; Hollies, especially

the Gold and Silver ones, Arbutus, Phillyreas, and more sparingly Portugal Laurels, which like a lower situation, and we expect most of the Pinus tribe of recent introduction will do with you—not so well, perhaps, as at a lower elevation; but Wellingtonia, Cupressus Lawsoniana, Thuja borealis, Thuja Lobbi, and others may, perhaps, do well. It can hardly, however, be expected that their growth will be so good as when 500 feet lower; but Junipers, Yews, and other things may be planted in exposed places and succeed well there. Under glass you may plant several of the Ceanothuses, as azareus, pilloisus, dentatus, &c.; Yellow and White Banksian Rose, Jasminum nudiflorum, Escallonia macrantha, a slow grower, but made up for by the rapid progress of Wistaria sinensis and Evergreen Honeysuckle. You might also try some of the Clematises, as C. lanuginosa. Garrya elliptica is also a handsome winter shrub, and, probably, a hardy Passionflower might survive. Against a north wall you might plant Cotoneaster microphylla and Simonsii, Crataegus pyracantha, and Pyrus japonica; but those first named all require a south or south-west wall. Of fruit trees, in such an elevated position, it would be best to plant only the very hardiest varieties, and, what is of more consequence, to prune and keep the trees low. Dwarf bush trees are most easily managed; pyramids also look well. Amongst others you may plant the New Hawthornden, Lord Suffield, Winter Quoining, French Crab, and Golden Knob Apples; Williams's Bon Chrétien, Swan's Egg, Aston Town, and Monarch Pears, with Orleans, Diamond, Prince of Wales, and Reine Claude de Bayay Plums in the open ground. The Peaches may consist of Royal George and Early Admirable for the wall, and the Cherries you may also have on the wall; a Morello would do on the north aspect. The small fruits may consist of the usual kinds grown elsewhere, increasing the depth of soil as much as you can for them, as well as for the fruit trees mentioned above; for the hardy timber trees and common shrubs we would merely break up the chalk and mix it with the heavy loamy soil on the surface; but for the choice fruit trees you had better remove a foot of the chalk and add that quantity of better material for—say 3 or 4 square yards to each plant. Manure at planting is not so much required; but if a dry spring and summer ensue, a covering of rough dung or litter around the collar will keep in much moisture that cannot well be spared.

STANDARDS FOR ORCHARD (G.).—Apples: Dumelow's Seedling, King of the Pippins, Blenheim Pippin, Lord Suffield, and Flower of Kent. Plums: Early Orleans, Royal Daphne, Green Gage, Washington, and La Delicieuse. Pears: Marie Louise, Williams's Bon Chrétien, Winter Nelis, Louise Bonne of Jersey, and Ne Plus Meuris. The above are all hardy, good bearers, and will prolong the season as far as can conveniently be done. If you could add Sturmer Pippin and French Crab Apples, as late-keeping ones, they might be useful.

PROTECTION TO A FLOWER GARDEN FACING THE NORTH (G.).—As your soil is sandy, with stone below, we expect nothing will really succeed better than the common Laurel and Laurustinus, as Portugal Laurels generally like a stiffer soil. You might, however, plant a row of Scotch

Fir (not Spruce) along the back, then common Laurels mixed with a few Lilacs, Mock Orange, and Deutzia scabra, the flowers of all of which are acceptable. Laurustinus and Phillyrea, with Box, might form the front, and you might try a few Rhododendrons if you think your soil is free from chalk or lime. The common Laurel forms the best screen, as it can be cut to any height without suffering. Berberis Darwinii is also a handsome and suitable shrub for such a place, and in the front, under shelter, you might try some of the Eonymus, Raphiolepis ovata, Griselinia littoralis, and other low-growing shrubs; but the plants first named are the most suitable for shelter; a mere screen may be more quickly formed by a rough trelliswork of poles, with Ivy planted and trained against them. Good plants quickly cover such a framework, and look well, too.

INFLUENCE OF A VINE STOCK OVER THE SCION.—"R. H. A." says "I have a Royal Muscadine Vine, about eight years old, on which I purpose to inarch the Trévère Frontignan. What do you think of the Muscadine as a stock for the Trévère Frontignan? Would the latter be in any degree altered in flavour or in size of bunch?"

[Having not tried this union we cannot venture to give an opinion, the Vine stock in many instances having a most powerful influence not only over the flavour but form of the berry. We shall be obliged by any one sending us information on this interesting subject.]

HAYS'S PEAT CHARCOAL (Many Correspondents).—The agent for this has left his premises, and we cannot obtain any information where it is to be obtained. Any peat charcoal in lumps, we think, would serve for fuel in Hays's stove, and we shall be obliged by any one informing us where such charcoal can be obtained.

NAMES OF FRUITS (R. T.).—1, Marie Louise; 2, St. Germain; 3, Inconspue. (H. S.).—1, Cumbusnethan Pippin, a well-known Scotch Apple; 2, We cannot recognise this; 3, Hampshire Pippin. (W.).—1, Beurrdiel; 2, Brown Beurrdiel; 3, Not known to us; 4, Kirke's Lord Nelson; 5, Russet Nonpareil; 6, Dutch Mignonne; 7, Beauty of Kent. (A. B. C.).—The Grape over which you dispute is the Syrian.

NAMES OF PLANTS (T. D. M.).—It is impossible to identify plants from mere leaves. (M. D.).—Mesembryanthemum blandum. (Adam).—Nidularia campbellata. (W. J.).—Aspidium (Polystichum) aculeatum, narrow-fronded variety. (G. M.).—Phytolacca octandra. (H. M. L.).—1, Selaginella Brownii; 2, Onychium japonicum; 3, Asplenium cicutarium; 4, May be anything, no fructification; 5, Selaginella viticulosa. (Maria).—1, Polypodium aureum; 2, Pteris cretica albo-lineata; 3, Nephrodium molle; 4, Adiantum formosum; 5, Nephrodium molle, var. cristata; 6, Blechnum or Lomaria (no fructification). (G. F. C.).—1, Physalis Alkekengi (Winter Cherry). The fruit is often eaten and relished, but should not be taken in quantities. (H. B. M.).—1 and 2, Juniperus chinensis; 3, Juniperus communis; 4, Not in a fit condition; 5, Lonicera parvifolia variegata. (Emham).—Tricyrtis birta.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending November 19th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 13	30.607	29.852	50	26	48	47	W.	.00	Overcast; overcast and damp; low fog, clear and frosty.
Thurs. 14	29.624	29.537	56	40	49	47	S.	.08	Rain; overcast, showery; overcast and mild.
Fri. . 15	29.603	29.551	61	44	50	48	S.E.	.00	Foggy; very mild; overcast; overcast and fine.
Sat. . 16	29.668	29.563	48	38	48	47	E.	.00	Overcast; boisterous and cold; boisterous; clear, very cold.
Sun. . 17	30.035	29.778	48	30	47	47	N.E.	.00	Overcast and boisterous; overcast, cold; cloudy at night.
Mon. . 18	30.243	30.162	43	39	48	47	N.	.00	Overcast and frosty; overcast; overcast, but fine.
Tues. . 19	30.247	30.230	49	26	46	47	N.W.	.00	Overcast, mild; overcast; clear and frosty.
Mean	29.918	29.810	50.71	34.71	48.00	47.14	..	0.08	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

FOOD REQUIRED FOR FOWLS.

So much misapprehension seems to exist about certain points connected with poultry, that we are disposed to "lump" a number of "querists," and give all answers in a short article.

One asks why poultry should not be fed on oats alone, as in Ireland, instead of oats and barley alternately, as in England? In this, as in many instances, the query does not give sufficient information. It does not state whether the birds in question are in confinement or at liberty, whether there is any natural food to be had or not. Fowls shut up will starve to death with oats before them. We have proved this. They will do the same with barley, if they are kept in any place with a scrupulously clean floor. Whole corn is enough to keep life and condition, if it has for helps grass, small pebbles, and insect life, such as can be met with in a grass run. Birds enjoying these will lay, and breed, and rear chickens; they will keep condition enough to be very valuable helps to the dinner-table when there is unexpected company, and the butcher has either been, or lives five miles away. But even this will not make marketable table poultry, as the term is understood in England. It is because the chickens in Ireland are fed on oats only that they take the low standing they do in the English market;

the number of them sent to this country would, if they were properly fed and killed, return three times the sum they now do. Poultry pays in Ireland, despite of the treatment it experiences, and not because of it. When the average of English chickens is 5s. per couple, that of the Irish is 2s. 6d., or scarcely as much. Climate has nothing to do with it, if it is anything more favourable in many parts than in England; the numbers that are sent prove this. It is in the breed, which wants improving; in the feeding, which consists of oats; and in the killing and packing, against which we have often remonstrated in our columns. We conclude our answer to "Kent" by saying, It is not desirable to feed on oats only, if we shall thereby assimilate our poultry to that we import from Ireland.

"ECONOMIST" asks the "oft-repeated" question, How much food should twelve adult Dorkings consume per week? We must start as we did with the predecessor. Tell us about the run, and the opportunities your fowls have. It is impossible to give an answer without knowing these, but you can ascertain what our answer should be before you can know it through our columns. Having taken account of your stock, feed a day or two yourself, measuring or weighing all you give. Six days will give you an average on which you can depend. We believe a quarter of a pint of good corn should feed a fowl and keep it in first-rate condition during a day, if it has any grass run at all; if not, the quantity must be increased, but not largely. Much, also, depends on whether the fowls are in good

condition when the process begins. A fowl in low condition will cost as much again as it will after it has been well fed for a week.

JUDGING POULTRY.

In your impression of the 31st ult. appeared a communication from Mr. Hewitt, complaining that the time allowed for the judges of poultry to perform their functions was frequently sadly insufficient to admit of their duties being done satisfactorily. Had I not expected some notice of the subject from one or more of these who, as exhibitors, are interested in it, I should have written before; and I must plead this circumstance as an apology for addressing you at this somewhat late period.

I quite agree with Mr. Hewitt that the defective arrangements in these matters, where they occur, inflict a great hardship on a judge who wishes to decide with a just impartiality; and it reflects seriously on committees when sufficient time is not allowed to admit of the claims of the different competitors receiving the attention they have a right to expect. But whilst it operates to the annoyance and inconvenience of the judges, it is a still greater hardship on exhibitors, since they are more largely affected by errors in judging where they occur, and the injury and disappointment are in consequence more widely extended.

It is quite time that this evil should be checked, and as one means I would recommend that where from unavoidable causes sufficient time is not allowed, the person officiating should perform his duty properly, so far as the time will permit, even at the expense of leaving some pens unjudged. It would be less unsatisfactory to exhibitors to allow a portion of the pens to pass without adjudication than that the whole work should be done in a hasty and slovenly manner, which can only lead to disappointment and discontent.

A correspondent, writing in your last on the Bristol Show under the signature of "Y. B. A. Z.," suggests that "a third person" should "examine the pens critically, as the awards are handed in, to detect faults;" but so far from remedying the evil complained of, it would aggravate it. The complaint of judges is want of time; but this would require more, as it would necessitate going over a greater or less number of the pens twice; besides, what competent judge would submit to have his decisions virtually overruled by "a third person?" But supposing the plan adopted, would it secure infallibility or universal satisfaction? Judging from your correspondent's own case, it would not. With the whole period of the Exhibition for his observation, and thus taking every leisure for making correct notes (and he appears to have had a tolerably keen eye in his critical examinations to the detection of faults), your correspondent has fallen into one very striking error, when, in commenting on Mr. Fletcher's birds which gained Mr. Lang's cup, he calls them "Black Reds," whereas they were "Brown Reds;" and the hen which he speaks of as "appearing very dark in colour," is, in fact, the reverse, the hen being very light. Possibly there may be other similar errors. An arrangement which, in my opinion, would work better, and certainly save more time than the suggestion of "Y. B. A. Z.," would be to separate the birds into distinct classes, and assign to each judge the class or classes with whose merits he is known to be most conversant.

Before I close this communication I venture to give expression to the hope that the Birmingham Committee have taken into their own hands the appointment of judges for their forthcoming Exhibition, and not deputed to one of their body so important a duty; for, certainly, it would give more satisfaction to exhibitors to know that the judges were appointed by their whole body than by an individual member of it.—AN EXHIBITOR.

CINNAMON AND BUFF COCHIN-CHINAS.

I HAVE jotted down for the consideration of your readers, a few remarks respecting Cinnamon and Buff Cochins.

It has for some time seemed to me a pity that the expression "Cinnamon and Buff," should still be retained in the prize lists of our leading shows. Any one unaccustomed to exhibiting would surely gather from it that birds of the two colours would be judged with strict impartiality, and that the various recognised shades of colour in both would be regarded as on a perfect equality, so far as colour is concerned. For instance, a lemon Buff bird ought in fairness to have no preference shown

it over a silver Buff or silver Cinnamon, nor a darker Buff over a dark Cinnamon. Being equally good specimens of their respective colours, equal marks for colour ought to be given to all, and the prize awarded in reference to their other points—shape, size, fluff, comb, &c. That this is not the case, is, I believe, generally acknowledged, and, what is worse, the taste of judges seems from year to year to fluctuate. It is not long since, at the Birmingham Show, the silver birds, in the hen and pullet classes, seemed to carry all before them, whereas last year, though very beautiful birds of this colour were exhibited, one solitary highly commended was, if I am not mistaken, the only notice taken of them. Again, at the same show, I remember calling the attention of one of our most noted breeders to a very large and well-developed dark Cinnamon cockerel, which I was surprised to find unnoticed. I asked him why such a bird was passed over, and he at once replied, "On account of his colour, no doubt. Cinnamons are not favourites with the Judges. In fact, it is not of the slightest use nowadays, sending them to an exhibition."

I desire to speak on this, as on other points, subject to correction. It is quite possible that I may have passed over some pen at the show to which I particularly refer, which would not bear me out in my assertion, and my recollection of the show is now nearly a year old. Still I have a strong impression that I am correct, and that exhibitors would bear me out, at all events, in my general impression, that many judges show, perhaps unconsciously to themselves, a preference for some particular shade of colour, in cases where the terms of the prize list would lead to the expectation that all shades would be placed on a perfect equality.

Again, as to the judging of Cochin cockerels, I should like to make a few remarks. Some birds "make up" sooner than others, and at an early age present the appearance of perfectly formed adult cocks. These birds are almost invariably both smaller and lighter than those which, to the unpractised eye presenting a certain appearance of "weediness," and "legginess," are in reality large-framed birds, unfilled-up, and invariably make the best and heaviest adult birds. If you ask a judge why he prefers the smaller and showier bird, I believe the reply will, in general, be, "Because we must judge of a bird as he is, not according to his capabilities, or according to what he may be developed into at some future time." It seems to me that this is a mistake, supposing, that is, that my assertion is correct, for I have no desire to seem to speak *ex cathedra*, but only as one seeking at once for further information, and to provoke friendly discussion on the subject.

It would be interesting to trace the future career of the winning cockerels at, for instance, the Birmingham Show, and I am under the strong impression that it would be found that they would, in the majority of instances, be nowhere as old birds, out-paced and distanced entirely by many a clumsy, weedy-looking cockerel, which only needed filling out to become a grand adult bird. In common fairness, then, ought not, to say the least, greater stress to be laid on the future capabilities of a bird, less on that early prettiness of full development which is the sure precursor of adult insignificance, so far as the two important qualifications of size and weight are concerned.

I have ventured to throw out these suggestions for the consideration of lovers of Cinnamon and Buff Cochins, and will only in conclusion apologise for the length of this communication.—DELTA.

SOMERSET POULTRY ASSOCIATION'S SCHEDULE OF PRIZES.

I AM in receipt of this schedule, and am sorry, with such a liberal list of prizes, to find fault, but I would respectfully call the attention of the Committee of this and other shows, to the necessity of a separate class for Black and White Bantams.

The Somerset Association offers two classes for Game Bantams, one for Sebrights, and then a class for Black, White, or any other variety. Now what chance do we stand against the foreigners, as we all know the great weakness of the judges for the Pekin and Japanese Bantams?

Bristol offered a separate class for Blacks, and obtained seventeen entries, which more than covered the amount of prizes offered. The Committee then classed White and any other variety together, the result being one entry, Pekin (first and cup, of course), one entry, Japanese (second), leaving ten entries of White to compete for the third prize, and which third prize was awarded to a rose-combed cock, and a single-combed pullet, evidently showing that as there was no other

foreigner in the class, the Judges did not trouble which pen of White was third. Now, had there been a separate class for White, most likely they would have had more attention.

Amateurs certainly cannot continue to enter Blacks or Whites in the Any variety class, seeing how badly they are served; and if Committees will look at the entries, they will find that Black and White will pay for a class to themselves, especially at any large show. I hope, if not too late, to yet see a separate class for them at Weston-super-Mare, in January next; if so, I shall enter two or three pens; if not, they must stay at home, as it will not pay to send them, with the sure chance of being beaten.

I see they have classes for Game, Sebrights, Whites, and Blacks, at Hanley. There they exclude foreign Bantams altogether.—G. T.

EXHIBITED FOWLS INJURED.

Mr White Dorking cockerel, which, with a pullet, took the only prize awarded in that class at the Bristol and Clifton Show last week, was returned to me on Sunday morning without a feather of any description left in his tail! The Secretary assures me that four men were engaged to watch the birds; still some mischievous or malicious person or persons succeeded in pulling out the tails of some of the cocks. Whether this injury is done as he supposes, or by the gross carelessness of those engaged to catch and repack the birds, is not for me to say; but, surely, exhibitors are entitled to the proper protection of the valuable birds they send to the Shows.—A SUBSCRIBER.

[One or more of the Committee should attend whilst their men are taking the birds from the pens, for the purpose of insuring care. Fowls should travel in close baskets, for railway officials, or boys at the station, are too prone thoughtlessly to ill-treat poultry.]

BRISTOL AND CLIFTON POULTRY SHOW.

FEW shows of the present season have been so complete a success as that held at Bristol. The Drill Hall is unquestionably one of the very best of buildings for the purposes of such a show, being unusually light, very well ventilated, and so large, that were it necessary as many as fifteen or sixteen hundred pens of poultry might be easily accommodated. The Committee being entirely composed of well-known poultry exhibitors, the public had full confidence in their management of the many valuable specimens that were entrusted to their superintendence, and we may truly say we never saw a body of gentlemen more unremitting in their efforts to carry out their duties satisfactorily. The weather, too, was remarkably fine for the season, and everything went on most pleasantly.

In the Grey Dorkings not only was the number of entries unusually large, but the quality of most of the fowls shown was extraordinarily good—so much so, that many of even the only highly commended pens at Bristol could easily take principal positions at most of our local shows. We have no doubt that the next few months will prove the present year to have been remarkable for the production of early-hatched first-rate Grey Dorkings. We should have been pleased could we have mentioned so favourably the White Dorkings. A more indifferent class throughout, however, we rarely if ever met with; and in respect to size, those shown at Bristol were scarcely larger than small Hamburgs. They were, in fact, so unquestionably bad, that both the first and third prizes were withheld.

Cochins were good, and a few pens remarkably so. It is rarely that Cochins have been shown of equal excellence, and so generally good as on this occasion; but we regretted to find several instances in which the whole of the principal tail feathers had been purposely extracted, possibly with the mistaken view of improvement; but this practice, whilst now becoming so general, is by no means permissible, and lost several pens the opportunity of appearing among the prize winners, which they assuredly would have done had they not been thus tampered with. The Cochins cup was awarded to a very good pen of Partridge-coloured.

The Game classes were of considerable merit, and some pens were such as have not this season been equalled. Mr. Boyes's Duckwings, Mr. Aylroyd's pullet, and Mr. Charles Chaloner's single cockerel, were most praiseworthy. Mr. James Fletcher, of Manchester, exhibited most excellent Brown Red Game, that were the most notable in the Show, as being not only the winners of the first prize in their own particular class, but also of the seven guinea cup for the best pen of Game fowls, and the President's cup for the best pen of any variety of poultry in the Exhibition.

The Spanish classes, which at last year's Bristol show were the gems of the exhibition, on the present occasion were not so well conditioned as we had hoped for, the greater proportion of the birds evidently being still far from the completion of their moulting. This difference, however, is easily explained, as last year's show was held

fully two months later, and, consequently, these Spanish birds having their plumage then fully restored, the faces were necessarily in their highest beauty—a result quite unattainable so long as they remain in pen feather. From this circumstance alone many noted exhibitors, finding themselves incapable of sending their Spanish fowls in their accustomed condition so early in the season, wisely preferred to let them remain quietly at home instead of hazarding them at the Show, where success would be so uncertain; consequently many pens were empty, that a month or six weeks hence would have contained such specimens as the Bristol Spanish-breeders can exhibit in mid-winter. Messrs. Parsley, Lane, Newton, Jones, and Heath managed, nevertheless, to support the claim of the Bristol Show to superiority in Spanish. So good indeed were the first-named gentleman's birds, that had he made a little different arrangement in the selection of his own pens of Spanish fowls, most probably the President's cup would have remained in Bristol.

Then came the *Brahma* classes, and certainly such a display of one-year-olds of this breed was never witnessed at any poultry show, the Light-feathered being in such number and of such excellence as to be surprising, and, as will be seen by reference to the prize list, they were chiefly from the yards of new breeders. Experience proves, however, that the Light-feathered Brahas are usually worsted in a general competition against the Dark ones. In the Dark variety the selected ones, purposely kept back especially for Bristol by that noted exhibitor Mr. Boyle, of Dublin, made good their position in classes where winning was by no means an easy task. Yet this gentleman, with only three pens, stood first in all three of the classes in which he had entered; but a still more unexampled achievement awaited him, for the magnificent specimen of a *Brahma* cockerel, exhibited by Mr. Boyle, took precedence for the seven-guinea silver cup, given to the best single cockerel of any breed in the Exhibition. The silver cup for the best pair of Brahas was also taken by birds from the same yard. Brahas certainly formed a most important feature of this Exhibition.

The *Hamburgs* were scarcely in the first-class feather that they might have been; but, still, there were many unexceptionally good pens. The Spangled Hamburgs proved the better varieties. Some excellent *Polish* and a strong class of *French* fowls were on view, and in the Variety classes were some perfect *Cochin Bantams*, and a pen of the now so rarely-seen entirely *Black Cochins*. It is worthy of remark that the cocks of this variety usually assume a mixed plumage at their second moult, though the hens remain black as ever—a feature that, perhaps, more than all else has tended to render them unpopular to all but the most persevering of *Cochin* amateurs.

The Game *Bantams* were very good, as were likewise the Sebrights; the Black *Bantams* were scarcely up to the mark in feather.

In *Aylesbury Ducks* the competition, so far as the prizes alone were actually concerned, lay exclusively between Mrs. Mary Seamons and Mr. J. K. Fowler, both of Aylesbury, and who, it is well known, are the two principal breeders in the kingdom. Each of these exhibited a couple of pens, all four alike, as being faultless in bills, plumage, &c. The result of weights, however, told extraordinarily in favour of the Ducks belonging to Mrs. Seamons, being respectively 17 lbs. and 16½ lbs. the pair, whilst her opponent's were 15 lbs. and 13 lbs. In the class for *Geese* even greater rivalry existed between the same exhibitors; a pen each was shown, Mr. Fowler's being *Toulouse Geese* and Mrs. Seamon's the *Emdens*. Here, again, so perfect were each of their variety, that the scales were again brought into requisition as a tell-tale, but proved worthless altogether, for each pen weighed so precisely 41½ lbs., that even a single ounce weight drew the scale in favour of either party. It might, therefore, have been justly deemed "a dead heat;" but by the rules there was no help for it, the prizes must be given one way or the other, and eventually after a useless waste of time in close scrutiny to discover any defect, the Greys were victorious. The *Turkeys* were admirable, and the display of *Pigeons* unusually good.

A complete list of the awards, together with the remarks of our correspondent "Y. B. A. Z.," appeared last week.

HAMPSHIRE ORNITHOLOGICAL ASSOCIATION.

THE extent to which the Show of this Association has advanced in public favour is remarkable, and undoubtedly this result is well merited, for few Committees are more desirous to perform every duty required of them; and Mr. Philip Warren has proved himself to be a truly model Secretary in all the manifold duties that throng so heavily at the last moment on such an official. The Hampshire Ornithological Show has not only become a large and important exhibition, but one that for the arrangements cannot be surpassed. There are two features which contribute to its popularity, even among a large number of visitors who are not especially fond of the culture of either poultry or Pigeons. We allude to the appointment of two classes, one for Pheasants or Game of any variety, foreign or English; and the other for foreign or British birds of any kind, including every description of those highly-coloured ones that so strongly attract the admiration of all comers. The marked attention these specimens insure, few persons except those who annually visit the Southampton Show could imagine; in fact, the continually thronged avenues devoted to these specimens, prove beyond question, how greatly they add to the interest. As regards the care bestowed on the birds, nothing

could be more praiseworthy, and the attendance of the public also left no grounds for complaint.

In *Spanish* fowls the prize birds were of great merit, but several pens in this class still require another three weeks or month before they will be in first-class condition. The *Dorking* class was good, and singularly enough in so excellent a competition, White Dorkings obtained the second prize, a couple of pens of this breed being shown by Mr. P. Edwards, of Lyndhurst, as good as have been exhibited for some years past. In the *Cochin* class, competition was open to any colour, and Partridge-feathered ones stood first. This well-known pen of Mr. Rodbard's, afterwards took the Hampshire Society's silver cup for the best pen of any breed in the Exhibition, being very hard-pressed, however, by the Golden-pencilled Hamburgs, exhibited by Mr. Pittis, of the Isle of Wight. The Dark *Brahmas* were a superior class, but the great feature of the Show proved to be the Light-feathered ones. This may be accounted for by the fact of an amateurs' silver cup being offered for the best pen of this variety. This class was good throughout. Most of the *Game* fowls were hardly in condition, the plumage being immature, though many of the specimens shown were undoubtedly excellent. In *Pencilled Hamburgs*, Mr. Pittis had it all his own way, and in the *Spangled* class, Messrs. Ashton and Mrs. Pettat were the successful exhibitors. *Polands* were much better than usual, as may with truth also be said of the extra variety class. In *Game Bantams*, Mr. Kelleway, of the Isle of Wight, swept all before him with three pens hitherto kept back; they were faultless in condition, and the "dabbling" of the cockerels proved them to have been most skillfully operated upon.

Some lovely *Pekin Bantams*, *Mandarin*, and also *Carolina Ducks*, and some superior *Japanese Bantams* were universally admired.

The show of *Pigeons* this year at Southampton, quite threw into the shade those collections produced at the previous meetings, for scarcely a class could be named not well filled. The silver cup to be awarded to the most meritorious collection of *Pigeons*, fell to the lot of Mr. Fulton, not, however, without causing a very close competition.

DUBLIN POULTRY SHOW.

THE show of Poultry held in the Agricultural Hall, Kildare Street, Dublin, on the 12th, 13th and 14th inst., was a first-class one, numbering in the aggregate about 160 pens. We must notice what we seldom see of late years at Poultry Shows—the very beautiful breed of White Turkeys exhibited by J. R. Taylor, M.D., Newtown, Mount Kennedy. They are this season's birds, and the Doctor assures us they are perfectly hardy, their flesh beautifully white, tender, and juicy, besides the great value set on their feathers. We notice this on account of some being of opinion that White Turkeys are less hardy than Black ones; but we are of opinion that white animals or birds are fully as hardy as those of any other colour. The beautiful White English Geese exhibited by Mrs. Warburton, Kill, Naas, also deserve our special notice. She won the first, second, and third prizes in the section, each couple weighing respectively 36½, 36½, and 34½ lbs., which are rather unusual weights for birds hatched in May last.

The following is the prize list:—

DORKINGS (Silver-Grey).—First, Mrs. Warburton, Kill, Naas. Second, J. C. Cooper, Cooper Hill, Limerick. Third, R. P. Williams, Glaslough, Clontarf. *Chickens.*—First, Second, and Commended, Mrs. Warburton.

DORKINGS (Coloured).—First, F. W. Zurhorst, Dublin. Second, R. W. Boyle, Galtrim House, Bray. *Chickens.*—First and Second, R. P. Williams.

SPANISH.—First, R. W. Boyle. Second, Miss de Courcy Drevier, Blackrock. Commended, R. P. Williams; J. C. Cooper. *Chickens.*—First, A. Comyns, Kingstown. Second, Miss de Courcy Drevier. Highly Commended, R. P. Williams. Commended, Miss Drevier.

BRAMA POOTRA.—First, R. W. Boyle. Second, A. W. Shaw, Rose Cottage, Limerick. Commended, R. W. Boyle. *Chickens.*—First, R. W. Boyle. Second, E. Wallace, Donnybrook.

COCHIN-CHINA.—First, R. W. Boyle. Second, F. W. Zurhorst. Highly Commended, A. Comyns. Commended, F. W. Zurhorst. *Chickens.*—First, F. W. Zurhorst. Second, Miss L. Warburton, Naas. Commended, R. W. Boyle.

GAME.—First, E. Close, Kingstown. Second, C. E. McClintock, Randalstown. *Chickens.*—First, E. Close. Second, C. E. McClintock.

HAMBURGHS (Pencilled).—First, A. Murray, jun., Limerick. Second, C. P. Staunton, Clondalkin.

HAMBURGHS (Spangled).—First, F. W. Zurhorst. Second, S. Mowbray, Mountbath.

WHITE-CRESTED BLACK, OR BLACK-CRESTED WHITE FOWL.—First and Second, Miss de Courcy Drevier. Commended, R. P. Williams.

LA FRIEUSE.—First and Second, J. C. Cooper.

HOUPOANS.—First, F. W. Pim, Rathgar. Second, A. W. Shaw. Commended, F. W. Pim; J. C. Cooper.

CRIVE COURE.—First, F. W. Zurhorst. Second, J. C. Cooper.

SINGLE COCKERELS.

DORKING.—First, Mrs. Warburton. Second, R. P. Williams. Commended, S. Mowbray.

SPANISH.—First and Second, A. Comyns, jun.

COCHIN-CHINA.—First, F. W. Zurhorst. Second, R. W. Boyle.

BRAMA POOTRA.—First and Second, R. W. Boyle.

HOUPOANS.—First, F. W. Pim. Second, J. C. Cooper.

TURKEYS.—First, J. C. Cooper. Second, W. Aitkin, Upper Rathmines. Third, J. C. Cooper. *Poult.*—First, Capt. C. Hamilton, Billitere House, Kildare. Second, J. C. Cooper. Third, J. R. Taylor, M.D., Newton Mount Kennedy. Highly Commended, Capt. C. Hamilton. Commended, J. C. Cooper.

TURKEY.—*Cock.*—First and Second, J. C. Cooper.

GESE.—First, Second and Third, Mrs. Warburton.

DUCKS (Rouen).—First and Second, R. P. Williams. Third, R. W. Boyle. Commended, H. M. Barton; S. Mowbray.

DUCKS (Aylesbury).—First, R. P. Williams. Second and Third, Miss A. Warburton. Commended, R. P. Williams.

JUDGES.—Mr. John Borthwick; Mr. R. Jones; and Mr. R. C. Wade.—(*Irish Farmers' Gazette*).

SCHEDULE OF THE NORTHERN POULTRY CLUB.

NEW year's-day, 1898, and following days are fixed for this Show. The analysis of schedules and entries which I made in "our Journal" a year or two ago, appears to have given me an office I scarcely bargained for, and to which Her Most Gracious Majesty's Governments, neither past nor present, have yet attached any salary! A great omission certainly; then, however, I should scarcely be "the right man in the right place." I am, somewhat like a polypus, tied to home, and I feel that this is no slight drawback to one whose word has become more powerful than was intended. To be a good censor, it is necessary to have constant interchanges of thought with others—a rubbing up of ideas, if not of noses, as some countries would have it. So little is this interchange of sentiment possible with me, that I may almost write as one literary worthy—"Here I sit and stude, and nobody's nothing the wiser!" It would be, however, very ungracious on my part not to acknowledge that others, even strangers, have placed a value on my remarks, to which they are little entitled; but if they serve in any way to put our poultry exhibitions on any better basis, I am well satisfied.

I have been led to pen these prefatory remarks, because a few days since I received a note from "the other side o' Tweed" with the Northern Club schedule, asking me to make a note on't in "our Journal." Had the Scotchman only been Irish, I might have hesitated, thinking it possible that it meant simply "Will any gentleman do me the favour to tread on me tails?" and I might have fought shy of a shillalah, even in the shape of a pen; but from over the borders it must be taken to mean what it says.

When, last year, our great grandmother Birmingham, let out to the world (of poultry I mean), her startling idea of single cock and pair of hen classes only, the experiment was deemed very hazardous by some; but most undoubtedly it was a move in the right direction, and one that will be largely followed, I apprehend; even as the "sensational" sale regulation of 1867, that proves that "there's life in the old dog yet," must be very generally adopted by leading shows, if they would maintain their position. The Aberdeen Show of the Northern Club in its general bearings has adopted the single cock and pair of hen classes, adding thereto a cockerel and one pullet class. Thus, Game, Spanish, Dorkings (Silver-Grey), Dorkings (Any other variety), Cochins, Brahmas, have each three classes—namely, cock, pair of hens, and cockerel and pullet. To each of these breeds a silver cup of two or three guineas is offered in lieu of a first prize. I apprehend that where a silver cup is offered in place of the prize money, it would be a more popular plan to say "enports value." Some of our leading exhibitors must need an extra servant to keep their poultry plate in order.

French fowls have two classes—for single cocks and pair of hens, all these classes being for "any age" birds. This is an addition to which they are fairly entitled, and which I have for some time advocated in "our Journal." Hamburgs (Gold or Silver-pencilled) have two classes, whilst the two varieties of Spangled have each two classes. A silver cup goes to the best pen of Hamburgs. Any other variety has a cock and hen class. Game Bantams have a single cock class, and cock and one hen class; whilst any other kind of Bantams have only the latter, Aylesbury Ducks one class, any other variety of Duck, Geese and Turkeys each one class. The Northern Club has adopted another point which I have often advocated—viz., that it is unwise to offer prizes of different value to the various breeds, as no one can say in what ratio the entries will be. All the classes except the selling Class have three prizes offered, £1, 10s., and 5s.; the entry for these prizes is 3s. 6d., quite high enough—too high, I am disposed to think; selling Class entry 2s. 6d., and prizes 15s., 7s. 6d., 3s.

There are various classes for Pigeons, with silver cups and medals; classes for dead fowls, Dorkings by themselves, whilst Mr. Tegetmeier offers "the Poultry Book" for any other breed. This I have noticed in one or two schedules, it certainly appears to me as if the book rather hung on hand! I confess I do not like the class with that prize.—Y. B. A. Z.

HARDINESS OF CANARIES.

IN your Journal of October 17th I see you say in your reply to "Trotter," that canaries will not stand a lower degree of cold than 46°, therefore I thought some of your readers might be interested in knowing that I have kept several in a room in which their water was often frozen, and last year I had thirteen in an out-door aviary the whole winter, with no more protection than a piece of felt over the top; and a thermometer hung on the wires in front of aviary registered on the 3rd and 4th

of January respectively -4° and -2° . All the canaries seemed quite as hardy as other birds I had in the same aviary at the time, which were nine bramblings, nine redpoles, five greenfinches, five chaffinches, two tree and six house sparrows, four doves, and several others. Five of the canaries are now alive, and of those that are dead four or five at all events were killed by a Bantam cock I put in a few weeks in the spring.—PHILIP CROWLEY, *Culberton House, Alton.*

SUPPLYING WAX—EFFECTS OF VIBRATION.

Would it assist bees in building their cells to give them thin sheets of white wax? My hives are situated about 40 feet from the railway, but on a higher elevation; I fear the vibration from the trains constantly passing may cause the bees to consume too much of their store before spring comes, as I suppose they may be often roused from their dormant state. What is your opinion? I know of no remedy.—C. A. J.

[It is doubtful whether bees would fabricate combs out of plain sheets of wax, but if the rudiments of cells are embossed upon them they are at the proper season readily accepted, and are, probably, of some service in assisting the bees by providing them with wax for the formation of cells. We doubt whether railway vibration will injuriously affect your bees, believing that they will become used to it, and that they will then entirely disregard it.]

LIGURIAN BEES IN JERSEY.

Will you allow me to correct an error which your correspondent, "C. B. EDUAM," has fallen into, in page 331, respecting my Ligurian bees?—an error which would easily be seen by any one reading with attention what was said of them at page 17. "C. B. EDUAM" says, "Mr. Tidey exhibited some honey made this year by his Ligurian bees." This is true; but he goes on to say, "Which together with the octagon super in which it was contained weighed 21 lbs., and he estimated the whole hive to be 100 lbs." This is not true. The honey made by the Ligurian bees was in a half-size Woodbury hive, similar to what that gentleman (Mr. W.), recommends as nuclei for artificial stocks. Its weight of nett honey was 14 lbs.

The correct statement respecting my Ligurians is this. In 1866 I obtained a stock from Mr. Woodbury. In 1867 I find myself in possession of three strong stocks without manipulating, averaging a weight in honey of more than 150 lbs., besides the super above named, containing 14 lbs. of exquisitely pure honey, in comb so fragile that the wonder is how it could contain the weight unbroken. If this, with the three swarms of bees, is not a satisfactory investment of money I do not know what is. The most remarkable feature in this is, that the super should be given by the second swarm or last, which issued on the 9th of June, and which in the case of the common bee my little experience has taught me it is bad policy to place by themselves.

Of course bars of honey could be spared from the stock boxes; but I prefer leaving them full, in the hope of being able early in the spring of next year, if all go well, to try my hand at manipulating, and I am having boxes made in accordance with Mr. Woodbury's instructions in *THE JOURNAL OF HORTICULTURE* for April last.

With respect to the octagon super exhibited, I took this, weighing 21 lbs. (Jersey weight, which gives $1\frac{1}{2}$ oz. more in the pound than the English), and a second honey box from below it weighing 28 lbs. (also exhibited), from a set of four Stewarton boxes and an eke. The two stock boxes remaining on the stance weigh 60 lbs., so that the whole would have weighed 109 lbs. This great weight was obtained by first putting two good swarms together in two boxes, and by affording timely increase of space to prevent swarming.

I ought to mention that there is scarcely a stock of bees in my aviary that does not contain more or less of the Ligurian element; but woe be to the black fellow that dares venture to trespass on their landing board.—A. W. TIDEY, *Manor Cottage, Noirmont, Jersey.*

POLLEN OR FLOUR.

I HAVE observed my bees of late years coming to their hives covered over with white. I have but lately found out what it could be; the other day as I passed by a hardy kind of

Balsam I found the bees very busy collecting honey from its flowers, and all of them quite white. I then examined the flowers, and found that the pollen on the upper part of the flower is so situated that a bee cannot enter without being covered by the white pollen. I enclose you some flowers and seeds of this Balsam. The plant is hardy, and seeds itself; its height is from 3 to 6 feet, and it is very suitable for clumps of shrubs, where I find it useful to fill up blank places. It is very sweet and scents the air for a great distance, and bees are very fond of it in autumn. I think if "T. H." and "C. F. G." will examine the cottage gardens they will find this Balsam to be the cause of their bees being white at this season.—HAWKINS.

[The specimen is some hardy species of Impatiens, but it was too mutilated for identification.]

TO PRESERVE CUT FLOWERS.—In order to keep cut flowers from fading, care should be taken not to put too many in the glass or vase, and to remove the water every morning, picking off every decayed leaf as soon as it appears, and cutting off the ends of the stems as soon as they show any symptom of decay. If a pinch of nitrate of soda be put into the vessel every time the water is changed, the flowers will retain their beauty for a fortnight or more. Common saltpetre will have nearly the same effect.—(*Western Rural.*)

OUR LETTER BOX.

CROSS BETWEEN DUCKWING AND BLACK RED GAME (Game Cock).—Duckwings are frequently crossed with Black Reds to keep up black breasts and colour in the plumage. We have also known the Black and Brown-breasted Reds to be intermixed. In both cases birds were produced of beautiful colour and apparent purity. In both cases also there are occasional sports that go back to the "*mésalliance*."

SENDING FOWLS TO AN EXHIBITION (Palatine).—In exhibiting at Birmingham we strongly advise you for every reason to send the cock and pullets separately. It will prevent accident and mistakes. The basket should be quite round to prevent breaking tail feathers. It should be high enough to allow the birds to stand up without even the cock's comb touching the canvas with which it is covered. It should be close all round to save the inmates from dangerous but not vicious curiosity and from mischievous boys and people. The bottom should be well covered with wheat-straw for large birds, and with oat-straw for smaller. Feed them on soft food before they start; give no whole corn.

TIME FOR SELLING GEESSE (Ignoramus).—Keep your Geese till Christmas. If they are young and fat, well fasted, and well killed, they will sell well at Leadenhall about the 19th or 20th of December, or 21st or 22nd, according to convenience. Michaelmas is now but little observed, so far as Goose-eating is concerned.

CRYSTAL PALACE POULTRY SHOW (Sutton, Surrey).—We have not heard that there is to be one; therefore, we cannot state the date.

NOTES OF POULTRY BREEDING.—"Lancashire" wishes that fanciers would publish in our Journal their experience in breeding other varieties than Game and Brahma, as done by "NEWMARKET" and "NEMO."

HODDAN PULLETS' COMB (Chemicus).—The leaning aside of a Hoddan's top-knot is not a disqualification, but it is a disadvantage. If we had to choose between a shade of colour in plumage, or an irregularity in top-knots, we should prefer the former. Uniformity is most essential in a pen, but this is a question, and weighing of defects. Top-knots are not essential in Hoddans as in Polands.

SILVER GREY DORKING COCKEREL WITH GREY DORKING PULLETS (Idem).—You will breed Grey and Silver-Grey Dorkings. We do not believe that in any yard all the birds bred are Silver-Greys. It is a difficult colour to produce, as is always seen in the classes at Birmingham.

MIGNONETTE—CONSUMPTION OF HONEY—PROTECTION (Carolus).—Bees obtain both honey and pollen from mignonette. We cannot tell how much honey per month is consumed by a hive of bees; but during the winter of 1858-9 we carefully weighed four stocks, and found the average diminution in weight from October 2nd, when autumnal feeding ceased, to February 22nd, when spring feeding commenced, to be 6 lbs. 5 ozs. per hive. This diminution was distributed as follows:—October 2nd to November 13th, 2 lbs. 8 ozs.; November 13th to December 23rd, 1 lb. 5½ ozs.; December 23rd to December 29th, 4 ozs.; December 29th to January 7th, 7½ ozs.; January 7th to February 3rd, 1 lb. 3½ ozs.; and February 3rd to February 22nd, 8½ ozs. The additional protection afforded during winter by covering hives with pieces of carpet or woollen stuff, will not tend to increase, but rather to economise the consumption of food by the bees.

FOOD FOR PIGS (A. P.).—Indian meal mixed with the barley meal will render it more fattening. We give a little peameal with the barley meal during the week before killing time.

POULTRY MARKET.—NOVEMBER 20.

THERE is still a total absence of trade. Poultry sells badly. Game is hardly saleable at all, and the market is very depressed.

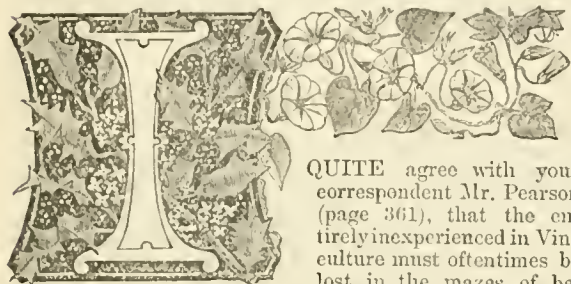
	s.	d.	s.	d.		s.	d.	s.	d.
Large Fowls	2	6	3	0	Pheasants	1	9	2	3
Smaller do.	2	0	2	6	Partridges	1	6	1	9
Chickens	1	6	1	9	Grouse	2	0	2	3
Geese	6	0	6	6	Hares	2	0	2	3
Ducks	1	9	2	0	Rabbits	1	4	1	5
Pigeons	0	8	0	9	Wild do.	0	8	0	9

WEEKLY CALENDAR.

Day of Month		Day of Week	NOV. 23—DEC. 4, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.	
				Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days.	m.	s.	
28		TH		48.4	35.1	41.7	20	41	af 7	55	af 3	17	af 9	4	af 6	2	11	57	832
29		F		47.9	34.1	41.0	20	42	7	54	3	5	10	54	6	3	11	36	837
30		S	Royal Horticultural Society, Promenade.	48.0	34.5	41.2	21	44	7	53	3	46	10	50	7	4	11	15	894
1		SUN	ADVENT SUNDAY. PRINCE OF WALES BORN.	48.4	35.1	41.8	18	45	7	53	3	26	11	43	8	5	10	53	835
2		M	Winter commences. 1844.	47.7	34.0	40.8	17	47	7	52	3	50	11	51	9	6	10	30	886
3		TU	Royal Horticultural Society, Fruit, Floral,	47.1	35.3	41.2	22	48	7	52	3	after.	54	10	7	10	6	837	
4		W	[and General Meeting.]	47.9	36.1	42.0	17	50	7	51	3	44	0	53	11	9	42	838	

From observations taken near London during the last forty years, the average day temperature of the week is 47.9; and its night temperature 43.9°. The greatest heat was 61°, on the 4th, 1857; and the lowest cold 14°, on the 30th, 1856. The greatest fall of rain was 1.21 inch.

MANAGEMENT OF VINES.



QUITE agree with your correspondent Mr. Pearson (page 361), that the entirely inexperienced in Vine culture must oftentimes be lost in the mazes of be-

wilderment into which the clashing prescriptions, which are tendered from time to time, are calculated to lead them. No greater service could be rendered to an increasing host of amateurs, who would like to grow for themselves a few Grapes, than to unravel the subject from much—though good in its own place, perhaps—that is expensive, and that tends to frighten many from attempting the culture of a fruit to produce very fair samples of which, and of excellent quality, does not call for anything beyond very common means. To do this is to my mind one of the most desirable horticultural objects of the present time.

What has recently been said as to the restrictive system ending in the destruction of Vines and in disappointed hopes, is calculated to do great harm; and, to my mind, much that has been said of the extension system of training is equally calculated to do harm. The same may be said of the calcareous turfy loam, bone, charcoal, horse-droppings, lime rubbish, &c., as the indispensable requisites of a border to grow Grapes, whether mixed on the "bread-and-butter pudding" system or on any other. The less butter and more bread that is typified in the Vine border of the inexperienced the better, if they are to steer clear of what I may call bilious Vines.

Not having a word to say against the finest turfy loam, bones, charcoal, &c., that the greatest lord of the manor can command, at the same time let not the amateur be deterred from cheering his more humble board with good Grapes because he cannot procure all or any of these ingredients. The sooner the idea is generally exploded, that fair and good Grapes cannot be produced by much more simple and inexpensive compost, the better will it be for the spread of Grape-growing in this country. Nay, I am confident that many for their Vines go hunting after loam that can be termed turfy, when a far safer material is lying in their own vegetable ground. Amateurs should be led to understand, that though turf is desirable—not indispensable—to start young Vines in, yet if the loam they procure is likely in the course of years to revert to an adhesive mass of mould, they would in the long run be much better with any friable ordinary garden soil well drained, and having but little manure of any sort mixed with it, applying the manure, instead, to the surface in the shape of mulching.

I have lately renewed about 400 feet in length of Vine borders, and used, in the first instance, fine, light, turfy loam,

the very same as that in which we grow our Pine Apples. As a walk runs along close to the front of the houses, these borders were very narrow, and only served to start the Vines. The most of the walk has been taken up and added to the borders, and, in doing so, I have not used a single spadeful of turf—nothing beyond the ordinary kitchen garden soil (which is a light sandy loam), and a few bones mixed with it, and the Vines have improved very much by such an addition of soil. I have encouraged amateurs to begin Vine-culture without any turfy loam, and their success has been far more than they expected.

As to the extension system being looked upon as necessary to the longevity of Vines, I consider this a doctrine calculated to raise imaginary difficulties to the class I am now attempting to encourage. Monster houses and big Vines are not subjects to be condemned by any one. For my own part I think the plan excellent; but I see nothing that has been yet discovered in vegetable physiology that can prove that a Vine on the single-rod system is not able to maintain its health for as long a time as one with three or four rods. Some may say, "Oh, look at the numerous instances of one-rod Vines perishing, and see those few noble specimens in Perthshire, at Finchley, and Hampton Court." Suppose these large Vines were attempted as numerous as the more limited in size, would they, too, not call for a calendar of mortality, especially if about half of them were forced to ripen their crops in April and May?

My idea has always been that the health and long life of a Vine depended, all other things being favourable, on the weight of crop carried in proportion to the amount of roots and leaves kept in good health. We have a late vinery here five feet wide, and with a nine-foot rafter. It was planted nine years ago, and it has ripened eight heavy crops of Grapes, which hung on the Vines for five or six months after being ripe. These Vines are on the system of a single rod to a rafter, and instead of yet showing signs of death from restriction they are improving every year by the addition of some common garden soil to their roots, and allowing the summer growth to remain for three or four joints beyond the bunch, instead of pinching at the first joint.

Take courage, ye amateurs who cannot step into an old pasture or deer park for soil, and who cannot build a house as big as a man-of-war for one or two Vines. I do not advocate very small vineries, nor nine-foot Vines; but good Grapes can be grown in such, as many an amateur has proved.

Another question which has been frequently put to me, especially by people holding land on lease, "How many years would it be before I had Grapes if I were to build a vinery?" It is no stretch of ordinary practice to tell the amateur that he can plant one year and have nearly a full crop of Grapes in the year following, by planting the Vines 2 feet apart, and cropping every alternate Vine the next season, cutting down those that are to be permanent for one or two seasons, if considered desirable. I find many amateurs have the idea that a Vine must be so many years old, and cut down so many times, before they can obtain Grapes, if they build a house.

There is one important matter in the case of those who have only one smallinery, and that is that they should avoid attempting early forcing. If they would allow their Vines to break of their own accord, and then begin forcing, say in the middle of April, but little fire heat would be necessary, Grapes would ripen at a time when they could have a longer season of them, and red spider would not be so common as when more fire heat is used. If all the Grapes be cut in October, then theinery can be used for plants taken up from the flower garden, and fire heat for three weeks then would both ripen the Vines well and start the lifted plants. This would be much better for the Vines than using fire heat to force early.—D. THOMSON, *Archerfield*.

BRONZE AND GOLD PELARGONIUMS.

A PAINTER once resolved to accomplish a picture that should please everybody. He therefore exposed his picture in the market-place, with directions for the spectators to mark, with a brush that lay near, every limb and feature which seemed erroneous. The spectators came, and in general applauded; but each, willing to show his talent for criticism, marked whatever he thought proper. In the evening when the painter came, he was mortified to find the whole picture one great blot. Not satisfied, he resolved to try them in a different manner, and exposing his picture as before, desired that the spectators would mark only the beauties. The people complied, and the artist returning found his picture replete with the marks of beauty; every stroke that had been yesterday condemned, now received approbation. "Well," cried the painter, "I perceive that the best way to please one-half of the world is not to mind what the other half says," since what are esteemed faults by some, are regarded as beauties by others.

Now, these Pelargoniums have met similar treatment. Many admire some varieties for certain good points or qualities, while others condemn them for some other quality or property in which they consider them deficient. Truly, we have not as yet reached the standard of perfection in this beautiful class of plants, but when we look back but a year or two, when one of the best was Beauty of Oulton, which may be considered the type of the present race, all must agree that rapid strides have been made since then.

Looking at the different varieties that have been exhibited this season, it is truly wonderful what progress has been made in the Bronze and Gold section, which will eventually be the cream of the bedders, yet I am bound to admit a great sameness exists in very many of the varieties.

For my own part I do not consider the plants brought to an exhibition a fair guide to the purchaser, as, of course, they are brought in the best style and colour which it is possible to do by ingenuity and device, in order to show them off to the best advantage, more especially with respect to high colouring. Therefore, I prefer seeing them at the raiser's home to judge of their merits. With this idea, having some business in the neighbourhood of Manchester, I extended my journey to Huntroyde Park, to determine for myself the merits and demerits of Mr. Wills's beautiful collection.

Do not marvel readers, that Bennett and Wills have met, shaken hands, and buried the Viola controversy, although I claim as a right to offer some remarks at a future time, complimentary to Mr. Wills and his Viola lines.

I regret to say my stay at Huntroyde was very limited, as the trains, like time and tide, wait for no man. But to the object of my visit—the Bronze and Gold Pelargoniums. Although I had not the pleasure of a former acquaintance with Mr. Wills, he with the greatest kindness showed me, without reserve, everything there was to be seen, and to those interested in such matters there was ample to satisfy any one thirsting after novelties. Perhaps the greatest of these is the success Mr. Wills has at last met with in crossing the Ivy-leaved with the Zonal Pelargonium. Yea, there the successful result is to be seen in unmistakable character. This I look upon as one of the greatest hits of the day in hybridising, and a boon to us all.

This collection of named and unnamed seedlings of the Bronze and Gold section is extensive, and above the standard of merit that I expected to find; and a dwarf variety, not of this section, named Robert Fish, particularly attracted my attention, it being very dwarf and a most abundant bloomer. To this may be added one of the Gold section, called Little Golden Christine, which appeared to be a little gem.

Amongst the Bronze and Gold section, foremost was Her Majesty, with the appearance of which I was charmed. The others I do not pretend to class as to their respective merits after leaving Her Majesty, for many of them are quite equal in beauty, and taste alone could decide in their favour. As in the case of the painter's picture, what some would cross out as defects, others would cross for beauty. The following are the new set not yet in commerce—viz., Empress Eugénie, Mr. Petch, Admiration, Arthur H. Wills, The Sultan, Fascination, and Attraction. Her Majesty, I believe Mr. Wills told me, would be sent out this autumn. The above are certainly a beautiful chaste set. I also noticed amongst those sent out by Mr. Bull this season—Perilla, Compactum, Model, Beauty of Calderdale, Firebrand, and Beauty of Ribblesdale. Although these are all good and truly handsome, they do not bear comparison with the new set in point of beauty.

Thus far it will be seen I have confined my remarks to the Gold and Bronze section, but at a future time I shall have something to say about Vines, Vine-borders, and Peach trees at Huntroyde.—EDWARD BENNETT, *Osberton Hall, Worksop*.

STOCKS FOR APPLE TREES.

THERE is, I think, nothing more interesting to the practical horticulturist, and I may also add, to the theorist, than the influence of the stock on the graft, in plainer words, on the tree grafted on to a stock, and the converse of the proposition, the effect of the graft on the stock. The latter being of a far more extensive nature than the former, yet, as it seems to me, not much known or expatiated on by horticultural writers, I hope one day to go into the subject, but at present I shall confine myself to the title of this article.

There is, as far as I have experienced, no fact so prominent in fruit culture, as the effect of the Paradise or surface-rooting stocks on the Apple tree. By the simple choice of a stock we can make a giant into a pigmy; and such varieties as Bess Pool, of which I have seen trees rivalling large Oaks in magnitude; the Bedfordshire Foundling, the Tower of Glammis, the Blenheim Orange, and other vigorous-growing sorts, can be at once reduced to small garden trees, rapidly arriving at a sort of premature maturity, and bearing profusely, which is brought about by merely selecting the kind of stock likely to produce such a result. The variety best known by the gardeners of the last century is that which we now call the French Paradise, "Pommier de Paradis." This would seem to be of Eastern origin, for some few years since the London Horticultural Society introduced the "Dwarf Apple of Armenia," which, as far as I could judge, was identical with the Pommier de Paradis. This kind of stock is noticed by Miller in his Dictionary, in the edition about 1750. I append an extract from it, which may interest some of your readers, showing as it does that there is nothing new in what has been said in your columns about Paradise stocks.

The peculiarity of the French Paradise is its remarkable effect on the graft, dwarfing it to an extent scarcely credible. The proportions of growth are something as follows:—A tree two years old on it will be about 2 feet in height, and covered with blossom-buds. A tree of the same age, and growing under the same circumstances, grafted on the Doucin, will be from 3 to 4 feet in height, and well furnished with blossom-buds, but not so abundantly as the tree on the French Paradise. A tree on the English Paradise stock will attain the same height, and be in the same condition as to bearing as that on the Doucin. A tree grafted on the Crab or Apple stock will at the same age be 7 feet high, and unless one of our free-bearing sorts, such as the Keswick Codlin, Hawthornden, and some kinds of the like habit, will be bare of blossom-buds. I give these results not as being exact, but to convey an idea of the effect of the different stocks I have named.

The Pommier de Paradis has been found too delicate for some soils and sites in England. I have found it so here, and Mr. Pearson, of Chilwell, has experienced the like in his deep fertile loamy soil. Fearing that I might have made my two or three essays on a soil too cold, I made a further trial, and in the spring of 1866, I had five hundred planted in a fine deep sandy loam, in the middle of a quarter, with five hundred Doucins on one side, and five hundred English Paradise on the other. The Pommiers de Paradis are nearly all dead from canker—no frost seemed to do them any injury—while the two kinds of stocks I have named here produced healthy trees free from any disease. It seems, therefore, that in some soils and sites this

stock is delicate. Against this we have the experience of Mr. Scott, who states that with him this stock is perfectly healthy. This is, no doubt, owing to his warm, fertile soil, and the soft air of Somersetshire, which is very different to the harsh, dry air of Hertfordshire.

There is a curious fact relative to this stock which belongs to my second postulate, but should be mentioned here. If a healthy graft is placed on a French Paradise stock the first year after being planted (stocks are for the most part grafted the second year), it seems to give health and vigour to the stock and to rescue it from canker. It is very curious to see trees in pots on this stock after three or four years' growth; the graft swells over and forms a large circular protuberance, as if impatient to escape from its thralldom; and the roots of the graft break out close under the swollen part; so that if the base of the graft were covered it would put forth roots, and, to use Miller's words, "would be equal to no stock." It is exceedingly interesting to watch in the graft this apparent yearning for more food. Apple trees on the Pommier de Paradis form the prettiest and most fruitful of all bush trees when cultivated in pots. Seedling pigmy stocks have been raised here, and I think also by Mr. Scott. These will probably prove harder than the French Paradise, and have the same dwarfing tendency.

The second kind of Paradise stock deserving of a few words is the English Paradise stock—a very old variety, which some thirty or forty years ago I used to receive from the Knap Hill Nursery, where it was propagated by layers. It was very distinct in its habit, and had rather large roundish leaves and pale bark. As far as I recollect, this was the only kind of Paradise stock employed in those days, and then to a very limited extent; for one hundred Apple trees on Paradise stocks then sold I should calculate that five thousand are now sent out by nurserymen. There are some seedling stocks of this race—two raised here, and some by Mr. Scott. One, called here the Broad-leaved Paradise, resembles the sort I shall next describe. They all swell with the graft, and produce healthy, fruitful garden trees.

The third variety of the Paradise stock race is the Doucin. This is probably of French or Dutch origin. There are several varieties of it, some of them worthless from their liability to canker. Those with small leaves like the Crab are to be avoided. The true sort has large pointed leaves of a dark green; the bark on its young shoots is of a very dark brown spotted with white; its leaves are more pointed than those of the Broad-leaved Paradise mentioned above, and not quite so large; it does not swell with the graft so well as the English Paradise stocks, but it forms healthy and fruitful garden trees.

The next race of surface-rooting Apple stocks is the Burr Knot, the old variety. The Burr Knot of most of our gardens bears very fine fruit, and is a valuable kitchen Apple. Like all of the Paradise race of stocks it roots from truncheons, or stout two and three-year-old shoots, planted in the ground, reminding one of the orchardists at Valparaiso and other parts of Chili, who do not plant a tree but a branch, which takes root, and at once forms a bearing tree. This brings to mind the Burr Knot Apple at Ware Park, Herts, there called "Byde's Walking-stick Apple," simply because an old magistrate who lived there early in the present century, used to stick in a branch of the Burr Knot wherever he thought an Apple tree wanting. The trees are there still.

A gentleman living near Narberth, South Wales, has a large collection of Burr Apples. He recently gave a list in a contemporary of ten varieties. The fruit of some of the kinds were sent to me. They were not of high quality, but some of them were handsome and good. It is just possible that the soil may have something to do in forming these burrs on the stems of Apple trees, which are, or seem to be, bunches of incipient roots. The English Codlin, formerly employed as a dwarfing stock, and mentioned by Miller as being used for that purpose, has burrs on its stem; and stout shoots, planted rather deeply, will root and make dwarf prolific trees.—T. R.

[Extract from Miller's "Gardener's Dictionary," 7th edition.]

"The Paradise Apple hath, of late years, greatly obtained for stocks to graft or bud upon, but these are not of long duration; nor will the trees grafted upon them ever grow to any size, unless they are planted so low that the eye may strike root into the ground, when it will be equal to no stock, for the graft will draw its nourishment from the ground, so that it is only by way of curiosity or for very small gardens

that these stocks are proper, since there can never be expected any considerable quantity of fruit from such trees.

"These trees have been much more esteemed in France, where they were frequently brought to the table in pots growing with their fruit upon them; but this being only a curiosity it never obtained much in England, so that the gardeners do not propagate many of them here at present.

"There is another Apple, which is called the Dutch Paradise Apple, much cultivated in the nurseries for grafting Apples upon, in order to have them dwarfs; and these will not decay or canker as the other, nor do they stint the grafts near so much, so are generally preferred for planting espaliers or dwarfs, being easily kept within the compass usually allotted to these trees."

PROPAGATING MRS. POLLOCK PELARGONIUM.

LIKE Mr. Boyes, I have heard of many failures, and think those who have succeeded should make their practice known. I quite agree with Mr. Boyes that my plan would not do if the principal display were required in September and October. In that case spring propagation must be adopted, but when I speak of the chief beauty of the garden being over, I mean when it has lost its first summer gloss, which with me is by the first week in September, at which time the cuttings are taken, and, I can assure Mr. Coupland, without the loss of either a single cutting or old plant.

With regard to keeping the old plants through the winter, and not cutting them until the spring, I must say that I, and many more, would find it rather a formidable affair to winter a few hundreds of such plants as Mr. Boyes mentions as measuring from 12 to 18 inches in diameter. It is all very well for those who have plenty of spare houses to winter their bedding plants in, to keep such plants, and to use them for ornamental purposes; but for the amateur, and the gardener who has but few houses, I must maintain that my plan possesses some advantages, and in such cases something must be sacrificed.

Of course, after a sufficient stock is obtained, there would be no occasion to cut up the old plants, as enough cuttings may then be obtained in the usual way. It must be quite obvious that the plan I advocate is more justly applicable to the increasing of the stock in its earliest stages.

"J. A." quotes Mr. Shearer's practice. At page 381, No. 295, vol. xi., November 20th, 1866, Mr. Shearer says, "I make it a rule never to take off a cutting until another shoot has shown itself on the same stem; by doing so I obtain a strong healthy cutting which makes a strong plant, while its removal does not weaken the old plant so much as taking off the ends of the shoots whenever these are long enough to make cuttings in the spring." This, I think, is rather condemnatory of Mr. Boyes's treatment.

"J. A." does not agree with me as to taking off the tops of the autumn-struck plants. I can assure him that out of about eighty or ninety plants so treated in the spring of this year, only two plants failed in becoming fine "stocky" plants quite equal, if not superior, to any spring-struck plants. I know it would cause them to become unhealthy, and in many cases to succumb, were it not for the styptic, which effectually prevents all these bad effects. I would refer "J. A." to an excellent article by Mr. Wills on this subject in vol. x., page 432.—EDWARD LUCKHURST, Egerton House Gardens, Kent.

INFLUENCE OF AN APPLE STOCK OVER THE PEAR GRAFTED UPON IT.

HAVING seen in your Journal accounts of different sports in fruits and flowers, I write to mention an occurrence that took place here this summer.

Growing on the south wall of my garden is a Pear tree, called here the Duchesse d'Angoulême; but as the label has been lost I cannot vouch for the correctness of the name. It is a large handsome Pear, rather long, very rosy on the side next the sun, and on the other side light green, turning to yellow when fully ripe, and the skin smooth.

About three summers ago my gardener grafted a scion of this Pear on a Peach Apple, he having previously cut off the head of the Apple. The scion took well, and this year bore nine Pears quite dissimilar from the parent. The fruit was short and round, of a deep russet colour, dark red on the side next

the sun and brown on the other, with a rough skin, and was pronounced by persons to whom I had given it to be superior to the fruit on the original tree, which is also a very delicious Pear. Both were ripe at the same time—the end of last month.—G. G., *Bullhill, Clonmel*.

DEEP-PLANTING ROSES.

I HAVE just read Mr. Radclyffe's remarks on "P.'s" experience on the deep-planting of Roses. I fear that I shall only add to his "astonishment" when I tell you that four years ago I planted two Gloire de Dijon Roses from 18 inches to 2 feet deep, and nothing could have thriven better.

They were budded on Briars at the height I have named, and I planted them deeply enough to allow the soil to cover the junction of the bud with the Briar. Each plant was a year old, and had a single strong shoot, which I cut in to about the fifth bud. The next year they sent out shoots from 8 to 10 feet long, and in three years they covered a piece of wall about 22 feet square.

I left the place this spring, so I cannot examine the trees to see whether the Briar has sent out roots high up the stem. The Roses themselves had not sent out roots at the point of junction, for I examined them with the object of ascertaining this.

I am told by those who have seen the plants this year that they were a most beautiful sight when in full bloom, so that I may conclude that they are still in perfect health, as they were when I left them.

The soil was a fair garden soil about a foot deep, on a subsoil of clay, which was dug up, and the two mixed together, with manure, at the time of planting.—H. T.

["Wonders will never cease." I am "astonished" at the statement of "H. T." I do not doubt the fact, but cannot explain it. It is contrary to my experience. I have found that by planting less deeply than above, and by adding soil year after year without removing the plant, the Rose had deteriorated, and did not succeed well till taken up and planted shallower. Briars have an affinity for clay; and I fancy they made roots higher up than the junction of the bud and stock.

I advise "H. T." to plant Mademoiselle Aristide, a chrome yellow Rose on his N.E. wall near Rugby. It is the hardiest yellow known, grows with extraordinary rapidity, and after the second or third year when not cut, or cut only a little at the points, is a most abundant-flowering and fine ornamental Rose. I believe it to be the same as Madame Schultze. If he does not wish to have a Rose, but Ivy, I recommend him *Rægneriana*—it is beautiful.

There is another very ornamental plant which I used against the north side of my house at Rushton, the Box-leaved Cotonæster, with white flowers and coral berries. I put up a trellis of wire, and let the plants grow up behind the wire.

I am still cutting beautiful Roses here (Dorsetshire). I cut nice Roses from Louise Margottin on November 4th, planted August 7th. Senateur Vaisse and others planted at the same time, have fine red buds. Only one plant died out of four or five hundred planted about that time.—W. F. RADCLYFFE.]

WHAT CONSTITUTES A LARGE, MEDIUM, OR SMALL-SIZED FRUIT?

I HAVE a grumble horticultural. Whether I have any just cause for this my grumble, I leave you to judge. I look at my crop of fruit, and then the idea comes, that I have reason to be proud of the fruit borne on this, or that tree. Then the horrid thought arises—my swans may be but ducklings after all; this Apple or that Pear is only a half-starved specimen in the eyes of the knowing. I desire to learn what is the average size of every variety of fruit in my garden. How can I arrive at this information? If I had gone to the Pomological Congress at Paris, I should only have learnt how fruit can be grown in France. This would be no guide to me in Yorkshire. I go for information to the Catalogues. They deal in riddles. Dr. Hogg and his Manual will enlighten me. He, like dealers with familiar spirits, discourseth on mediums, and "under" and "over" medium; sometimes, more mysterious still, he expandeth into "large"—large medium, I suppose.

Who can construe "medium?" Dr. Johnson is at fault. No dictionary, English, Latin, or any other language, can tell me anything about this indefinite, indescribable horticultural me-

dium. I try to arrive at some idea of it by comparison, so I take Pears. Alexandre Bivort, medium; Bergamotte Esperen, medium; Comte de Lamy, medium; Joséphine de Malines, medium; Beurré Goubault, medium; Zéphirin Grégoire, medium. What! All these one and the same medium? No, this cannot be. Then each has its own medium. The mystery deepens, instead of growing clearer.

The weight of a Gooseberry is known to a grain. Why should not that of other fruits be published. The letter scales are on every writing-table. It is no difficult matter for a person well acquainted with fruits, to weigh what he considers to be an average-sized fruit of each variety within his reach, and publish the result. We fruit growers in our several gardens would then have a standard of excellence to aim at, and surpass, if possible. We should not be so completely in the dark as to the result of our produce as we are present.

WEIGHT OF PEARS GROWN IN MY GARDEN, 1867.

Marie Louise, 6ozs.	Zéphirin Grégoire, 6½ ozs., three on one flower-stalk, 1lb. 1½ oz.
Louise Bonne, 5½ ozs.; large even crop.	Four Winter Nells, 1lb.
Beurré Superfin, 8½ ozs.	Doyenné Boussoch, 7ozs.; on bush.
Beurré d'Amaulais, 7½ ozs.	Beurré de Rance, 7½ ozs.
Summer Beurré d'Åremberg, not quite 4ozs.	Fondante d'Automne, 4½ ozs.
Baronne de Mello, 4½ ozs.	Autumn Bergamot, 4½ ozs.; two years old tree here.
Beurré Sterckmans, 6½ ozs.	Passé Colmar, 5ozs.
Beurré Diel, 7½ ozs.; large even crop.	Bergamotte Esperen, 4½ ozs.
General Todtleben, 8½ ozs.	Joséphine de Malines, 5ozs.
Easter Beurré, 7½ ozs.	Beurré Goubault, 3½ ozs.; large crop.

APPLES.

Two Lord Suffield on one flower-spur, 13½ ozs. each; the two, 1lb. 11ozs.	Dumelow's Seedling, 9ozs.
	New Hawthornden, 1lb. 1oz.

—C. MASEDEN, *Gargrave Rectory*.

WINTER-BLOOMING PLANTS.

It has been my duty, my good fortune, and my pleasure during the last sixteen years to devote a considerable portion of my time to keep up a continuous supply of stove and greenhouse flowers all the year round. I have tried nearly everything in cultivation, anxiously seeking for such forms of beauty as should afford the best *matériel* for accomplishing my object. I needed colour, durability, perfume, and diversity of habit or form, so that my arrangements or floral pictures might present a pleasing combination of the above requisites, for although much depends upon judicious arrangement of character and colour, nevertheless, it is very important to select the kinds or varieties of plants which are most suitable, or best adapted to meet our requirements. If these points were carefully considered by men of experience, there would be fewer disappointments in this particular department of gardening, for there is no great difficulty in supplying an abundance of flowers throughout the winter, if the right sort of houses, plants, and men are provided.

I am pleased to observe that one of your correspondents has particularised *Salvia splendens*, as a worthy and desirable winter-blooming plant. I heartily endorse what he has stated respecting its merits. It is an old plant, it is true, but if we look for real merit, or fitness, we shall not require any particulars respecting the date of introduction. We adopt a similar course in our treatment to that practised by Mr. T. Winkworth, with this exception, that we do not plant out because of the trouble of having to establish the plants when taken up in the autumn. We pot into 10-inch pots during the middle of May. We select a shady situation, and plunge our pots to the rim in half-decayed litter. They require little further trouble than stopping and well watering, and can be at once removed to a forwarding-house. They require very little attention in proportion to the effective display which they make. For table or bouquets they are equally effective, and they are within the reach of all.

I believe that very many gardeners have a notion that this *Salvia* requires heat during its growing season. I know when I was an apprentice it was grown as a stove plant, and I remember it was very frequently my duty to wash the *Salvias*, for the red spider patronised it extensively; but now that we treat the plant rationally we are not troubled with washing it: in fact, we treat it exactly the same as our *Chrysanthemums*.

Those who wish to make up a cheap and effective display for this dull season should secure some *Salvia splendens* and yellow and white *Chrysanthemums*, which, together, can be made to form a very pretty picture.

There is, also, another plant of the same family which is not so showy, but is of a different colour—namely, a rosy lake. It produces its flowers in very great profusion, and in a form exceedingly suitable for bouquets; moreover, the scent, both of the leaves and flowers, is very pleasing, this kind is well worth growing. We have it by the name of *Salvia camertonii*. It is also a winter-blooming plant.

For such as have plenty of room, there is still another *Salvia* well worthy of culture. It is *S. gesneriiflora*, of a very strong vigorous habit of growth, producing immense spikes of the brightest scarlet flowers. We have had plants of this variety upwards of 20 feet in circumference. They bloom best during the end of January or February. They all require the same treatment.—WILLIAM LAYNE, *the Gardens, Fir Vale, Sheffield*.

NOTES ON SOME OF THE GARDENS IN PARIS.

THROUGH the kindness of my employer, I lately had the opportunity of spending a few days in Paris. I started from London by the midday train to Dover, and after a most delightful passage across the Channel arrived at Calais about 11 o'clock at night. This being dark, I could not see the country through which I travelled, until I reached Amiens. From this place the scenery is most beautiful, there being hundreds of acres of dense forests on each side of the line; and the undulating ground, the streams, and the autumnal tints of the leaves of various trees had a very pretty effect.

Arrived in Paris, after spending the first two days in the Exhibition, I went to see the Horticultural Show, held on a naturally level piece of ground several acres in extent, and which has been diversified by huge mounds, waterfalls, gigantic rockwork, aquaria full of various kinds of fish, beautiful glades of grass of the richest green, glass houses, hundreds of beds of various sizes filled with beautiful shrubs and choice flowers, and new but well-kept walks, leading to various objects of attraction. When it is considered that only a few months ago the above ground was quite level, and used as a parade ground for soldiers, for which purpose it will soon be employed again, those who made it a beautiful picturesque garden deserve great credit.

There was a great exhibition of fruit, vegetables, and flowers, but the Pines and Grapes were very inferior to such fruits as generally seen at English exhibitions. A few Peaches of middling quality were shown. Pears and Apples were in abundance; those in one dish of six, the finest in the Exhibition, were splendid, but neither the name of the fruit nor of the exhibitor was given. The next best dish was contributed by M. Gallien. Some fine fruit of Doyenné d'Hiver, were also shown. Apples were of all sizes, the largest fruit was called Grelot, this is a useful fruit when large dishes for dessert are required; Reinette Parmentier, and Reinette du Canada, were in good condition. Several collections of vegetables were shown. Potatoes generally were very small. Onions, Carrots, Turnips, and Beet, were not remarkable. A group of variegated Kale sent by MM. Vilmorin, Andrieux & Cie, Quai de la Mégisserie, had a pretty effect. The collections of vegetables were exhibited on vacant beds on the grass by the sides of the pathways in various parts of the grounds.

There was a collection of small but well-grown Orchids, in good bloom; these came from M. Linden, of Brussels, and deservedly took the first prize. A collection of *Ericas* in beautiful bloom was also exhibited. *Gladioluses* were the principal cut flowers; M. Senchet, M. E. Verdier, and M. Loise, being the principal exhibitors. M. Gabriel, head gardener at the Palace of Meudon, had between 200 and 300 *Zinnias*, in 24-sized pots, plunged in a bed; they had been very fine, but their beauty was over when I saw them. There were likewise large collections of standard Roses and Pears, the use of which I could not perceive, as on the Rose trees scarcely a flower was to be seen. Several groups of bedding plants were also contributed, and consisted of such plants as are in common use in this country.

I next went to see the gardens at the Tuileries, which are 2230 feet long, and 870 feet broad, and were designed by the celebrated landscape gardener, Le Nôtre. The flower-beds are very large, and all of them are planted on the mixed system; Roses, Cannas, Dahlias, &c., being planted for the centres of the beds, and *Calceolarias*, *Pelargoniums*, *Verbenas*, and similar plants, being used for the outsides. A broad band of Ivy surrounds each bed, and gives a cheerful appearance both in summer and winter. The Ivy is about 18 inches broad, and 3 or

4 inches high. The grass is not kept so closely shaven as I expected to find it, and I was rather surprised to see scythes at work instead of mowing machines, the scythes having straight handles, and the men standing quite upright to mow. Many of the Orange trees are from two hundred to three hundred years old, and in summer they must diffuse the most delicious fragrance. They occupy the ground which during the reign of terror (1793) was a Potato field.

The Boulevards, some of which are several miles in length, are planted with two or more rows of trees, chiefly Planes, Chestnuts, and Elms, and give Paris a cheerful and country-like appearance. The gardens of the Luxembourg are also very extensive, and contain tasteful flower-beds, and delightful shady walk.

In the great central market, which is between 500 and 600 feet square, and is divided into four compartments, I noticed fine Gourds being cut up at two sous per slice, as well as an immense quantity of vegetables, and hundreds of bouquets tastefully arranged.

I next went to the Champs Elysées, a most charming promenade for all classes. It is intersected by several pathways, a fine carriage road, and several straight rows of trees, which form double avenues of great length. There are very large beds on both sides filled with choice shrubs, and bordered with *Iresine*, *Cineraria maritima*, and other bedding plants, and great numbers of Cannas, which are well managed.

My next journey was to the Bois de Boulogne. The wood is many hundreds of acres in extent, and through it and the fine park are some magnificent avenues and gravel-walks or drives 150 yards wide, with grass verges on each side in excellent order. Scores of miles may be traversed, and all will be found in the same good keeping. About the centre of this delightful place is the Jardin d'Acclimatation. Here various experiments are made with a view to acclimatise foreign plants, animals, and birds. The grounds are beautifully laid out, and furnished with tastefully-constructed cages, hothouses, and pavilions. A stream which traverses the gardens, with its picturesque islands, rustic bridges, and rockwork, serves for the culture of aquatic, and other plants. The garden department is very extensive; in one part is a fine conservatory 200 feet long, by 100 feet wide, which is full of *Camellias*, Orange trees, and the plants usually found in such structures. The whole groundwork of this house is completely covered with *Selaginella denticulata*, in perfect health, and most refreshing to the eye. At the end of the same house is some beautiful rockwork covered with rare Ferns, with a winding staircase from bottom to top. Another house, not quite so large as the above, was filled with small birds of almost every colour, with the *Selaginella* round every cage. In the out-door department were some large masses of Cannas and other sub-tropical plants in luxuriant health, and *Begonias* were flowering profusely. *Pelargoniums* and other bedding plants are all planted on the mixed system. One very large glass house, kept nearly dark, is fitted up with compartment and devoted to the artificial breeding of fish; there are ten glass reservoirs filled with sea water, and four with fresh water which is constantly renewed. It may interest the reader to know that two of the principal managers of the Jardin d'Acclimatation are Englishmen.—J. PERKINS, *Thornham Hall*.

(To be continued.)

GIGANTIC BOUGAINVILLEA.

IN a letter from my brother-in-law, a major in the army in India, he describes a *Bougainvillea*, and I think that its dimensions, which I send you, will make some of our brethren almost wish to take a voyage to India on purpose to see it.

He says, while speaking of the great things which he purposes doing in gardening, writing from Bangalore, "I wish you could see a *Bougainvillea* in one of the gardens. The stem at the base is about 1½ feet in diameter, and branches go from this of the thickness of one's arm (and his is a pretty stout one). It has covered a large Mango tree, and you can hardly imagine anything more beautiful. It is only beginning to show the coloured leaves now at the top of the tree and in other parts of it, but in January people say the whole tree is one mass of colour. I never saw such a place as this is for beautiful creepers." The sight would be, indeed, a gorgeously one no doubt.—ROBERT WRENCH.

LAROE DUCHESSE D'ANGOUTEME PEAR.—I grew this year amongst others, on a small tree in a pot, one fruit of this

variety, weighing 26 ozs. In about ten days after it was pulled it was eaten, and proved a splendid fruit.—JAMES PIM, *Monks-town, Dublin.*

THE LIVERPOOL HORTICULTURAL SOCIETY.

THIS SOCIETY held its fifth winter Flower and Fruit Show on the 20th and 21st instant. The day, though cold, was fine, and the Exhibition on the whole was a very successful one. The arrangement of the exhibition tables and stages was most creditable to all concerned, and the Exhibition, when viewed from the galleries on each side of the noble St. George's Hall, had a very pleasing effect.

Chrysanthemums and fruit formed the principal features of the Show. There was a magnificent display of hardy fruits, such as Apples and Pears. There were also numerous and good exhibitions of Pine Apples and Grapes. The Judges must have found it very difficult to select the first-prize dishes in the classes for Apples and Pears, as there were so many collections of first-class quality. The Pines exhibited by Mr. Freeman, gardener to Lord Derby, were fine examples of cultivation; and the Grapes from Mr. Hill, Mr. Meredith, and others, were unusually good for this season of the year.

The Chrysanthemums were splendid masses of bloom; the plants were also fresh, and the foliage clean and good. Three or four of the collections which won the premier prizes were superior to any I remember to have seen produced at the London exhibitions, and this is saying much for cultivators of this pretty popular flower in the neighbourhood of Liverpool, where the dampness of the atmosphere is so unfavourable to the successful cultivation of the Chrysanthemum. Much care and watchfulness must have been exercised to have enabled the exhibitors to produce such magnificent plants, with foliage so fresh and free from mildew—one of the greatest evils, I consider, which the Chrysanthemum-cultivator has to contend with. Those exhibitors who won the principal prizes therefore deserve much credit for producing such fine results under great difficulties. There is, however, room for improvement in the staging and arrangement of their plants. There was perceptible in many instances a want of taste in the staging of some of the collections, also in the blending of the colours; the sticks, also, with which the plants were trained, were much too large, and the absence of paint made them look anything but artistic. If they had been neater, and painted green, it would have added considerably to the appearance of the plants, and in some instances the skill of the cultivator was a little at fault in calculating the time the plants would require to grow into proper form. It was noticeable in some instances that the flowers on many of the plants were not made the most of, by reason of their not appearing all one way. This was owing to the shoots being tied into their proper places too late; there was not time for them to regain their proper position before the flower-buds were formed. The last tying should always be done at least a month or five weeks before the flower-buds appear on the points of the shoots. These will all assume an upright and even appearance, and the flowers will, as a natural consequence, all face one way, if the plant is formed into whatever shape it is intended to assume at the proper time.

In the class for twelve large-flowered varieties Mr. Matthews, nurseryman, of Bootle, took the first prize with as finely finished and highly cultivated a collection as ever graced an exhibition. The plants were all fresh and clean, and the foliage healthy and good; the flowers were large and of fine shape and substance, and nearly all at one stage of expansion. The same may be said of all, or nearly all, of the first and second-prize collections. Mr. Matthews also took the first prize in the Nurserymen's class for nine Pompon Chrysanthemums. These were equally well grown; each plant was perfection as regards neatness and beauty. In the Amateurs' class for nine large-flowered varieties, Mr. Hignett, gardener to C. Rowe, Esq., Anfield, took the first prize with a splendid lot of plants of large size and well grown. Mr. Hignett might aptly be called the king of the Lancashire Chrysanthemum-growers, for he took the lead in every class with, I believe, a single exception. The two collections which won the second and third prizes for nine large-flowered varieties were also splendidly grown, and were so near alike in every point of excellence, that much difficulty was experienced in determining which really was the better of the two collections. In the class for six large-flowered varieties Mr. Hignett again took the lead, and Mr. Wilson was second with a fine collection. In the class for three Mr. Whitefield was first and Mr. Hignett second. The same gentlemen's names appeared just in the order in which they are given above throughout the classes for single specimens, collections of Pompons, pyramids, standards, &c. The same exhibitors also competed in the classes for cut blooms. These were numerous, but the blooms were not so large as those generally seen at the London Chrysanthemum shows. There was also a great and perceptible difference in the style of exhibiting cut blooms from that practised round London. The successful exhibitors in the several classes for cut flowers were Messrs. Whitefield, Hignett, and Smith. Mr. Whitefield's stand of eighteen cut blooms was certainly very good.

Prizes were offered for Chinese Primulas; but those shown were not worthy of the awards they received. There was but a limited number of subjects shown in the classes for stove and greenhouse Ferns. This, probably, was owing to the sharp frost on the morning of the 20th, which most likely deterred intending exhibitors from bringing their plants out of their warm houses, lest they should have

suffered injury in transit to the Hall. There were only two exhibitors competing in this class. The tree Mignonette was not so good as I have seen at other shows. The principal exhibitors in this class were Messrs. Wilson and Shaw.

There was a lively competition in the class for bouquets for the hand; each exhibitor competing appeared to have an unlimited supply of choice and good flowers to cut from, even at this dull season of the year, for there was more than double the quantity of flowers in every bouquet exhibited than there should have been. Half or one-third of the flowers which each of the bouquets contained might have been made to produce a much more graceful effect if a little more skill had been exercised in the arrangement. In the Amateurs' class Mr. Myers took the first prize, and Mr. Wilson the second. In the Nurserymen's class Mr. John Delamere took the first prize. His bouquet I considered the best of those exhibited, in all about thirty-six. It was composed of white Camellias and fronds of the graceful Maiden-hair Fern (*Adiantum cuneatum*), but I thought it too heavy. The second-prize bouquet in this class was pretty, but contained too many flowers; although beautiful to look at, and very fragrant, no lady would have liked to have carried it for any considerable length of time on account of its weight.

Mr. Freeman, gardener to Lord Derby, had in the class for ornamental-fruited trees, suitable for dinner-table decoration, some fine plants of *Solanum capsicastrum*, which well deserved the first prize which was awarded for them. They were fine plants, with straight stems, and covered with bright coral berries; certainly the best-grown plants I have ever seen. Mr. Davies, of Wavertree, took the second prize with three plants of the pretty *Skimmia japonica*, very well covered with berries. The latter plant, as well as the *Solanum*, is very suitable either for dinner-table or conservatory decoration. Mr. Davies likewise exhibited several of the berry-producing *Aucubas*, showing their adaptability for winter decorative purposes.

From Mr. Davies came also a beautiful photograph of a fine plant of *Lilium anatum*, grown at his establishment during the past summer. The plant was 9 feet high, and matured fifty-three blooms; these were supported by three stems, and all from a single bulb. This bulb has been in Mr. Davies's possession about three years, and has had very little care bestowed on it, all that was done being simply shifting it into a larger pot every year without shaking any of the old soil away. Some of the blooms, Mr. Davies told me, measured 12 inches in diameter. This shows what splendid results may be obtained in the cultivation of this magnificent Lily by simply potting it once a year into larger pots. What a grand object this Lily will be when grown amongst our Rhododendrons and other American plants, where it may be allowed to remain all through the winter. There is no doubt that even greater results than those obtained by Mr. Davies may be gained by growing it in the open air in beds of well-prepared soil. Masses of it would certainly be most attractive if dotted over the Rhododendron-beds, and the flowers of the Lily would be shown off to great advantage by the dark glossy foliage of the Rhododendrons.

There was a class for pans of the Roman Hyacinth, and those shown were very pretty. This is certainly a most useful flower. At present, however, there is only the white variety in commerce; but Mr. R. Kerr, of Basnett Street, Liverpool, told me that he should be able to distribute a blue variety of it next year. I advise all who have not already tried this little gem to order it at once. I have had it in bloom for the last six weeks; it is most useful for cutting for conservatory decoration, not a bulb but produces one or more spikes, and it may be had in flower in the first week in October, and be continued by successive sowing all through the winter.—J. WILLS.

ENTOMOLOGICAL SOCIETY'S MEETING.

THE first meeting of this Society for the present season, was held at Burlington House, on Monday, the 4th inst., the attendance of members being very numerous, and the chair occupied by Professor Westwood, V.P. An extensive series of donations to the Society's library was announced, including the publications of the Linnean and Zoological Societies, and the Societies of Moscow, Lyons, Boston, U.S., New York, California, Essex, U.S., Stetten, Geneva, Königsberg, Brussels, &c. Certificates in favour of A. H. Haliday, Esq., and six other candidates were read.

Mr. F. Bond exhibited three new species of Moths, new to the British lists—namely, *Payche crassiorella*, Brund; *Grapholitha ravulana*, H. S.; and *Coccyx vernana*, Knaggs.

Mr. McLachlan exhibited a female specimen of the very rare Brazilian Mantid (Trichoscaglia) moth, of Erichson, the male of which has densely hirsute legs; also, some remarkable insect monstrosities—viz., *Hylotoma fasciata* having one of the hind tibia divided into two joints, the outline of which was clavate; *Tenthredo scutellatus* with five wings, the right side having a supplemental wing partaking of the character both of the fore and hind wing, inserted between the two normal wings (Professor Westwood instanced an analogous case in the Stephenson collection, of a Butterfly with five wings); and *Tenthredo madidus* with the right side female and the left side male, the division being equal, but in a specimen of *Limnephilus striola* the right side was partially male and the left female, the abdomen being entirely female.

Mr. Edward Saunders contributed a memoir containing a revision

of the Australian species of Buprestidae, described by the Rev. F. W. Hope, now in the Oxford Museum.

Mr. F. W. Wood read a memoir on the variation of colour in chrysalids, dependent upon the position in which they are placed. The author exhibited a large number of chrysalids of the Swallow-tail and large and small Cabbage Butterflies, varying greatly in colour, some, which had been confined in a box with the inside blackened, being nearly black, while others were bright green, and some nearly colourless, the green ones having been found on or covered by leaves, whence the author inferred that the variation in colour served as a defence against the enemies of the insect by preventing them from seeing it. Mr. Bond, however, denied that the colour of the locality where the chrysalis state is effected, does in the least affect the colour of the chrysalis itself, mentioning that he had found three chrysalids of the Orange-tipped Butterfly of different colours on a single plant of the common Rocket.

Mr. Pascoe communicated a note on the collecting of the common Cockchafer in Switzerland, for obtaining a supply of grease used for cart wheels, &c.

A memoir was communicated by W. C. Hewitson, Esq., containing descriptions of a number of new and beautiful species of Butterflies, from Nicaragua, Ecuador, Quito, &c. A paper by the Rev. D. C. Timia, was also read, containing a monograph of the beautiful genus *Thais*, of which the author enumerated seven species, found in the south of Europe and north of Africa.

NEW BOOKS.

Introductory Text Book of Geology. Seventh and enlarged Edition.

Advanced Text Book of Geology, Descriptive and Industrial. Fourth Edition, revised and enlarged.

By DAVID PAGE, LL.D., &c. Blackwood and Sons.

WE know of no mental dejection so fatal to acquiring a knowledge of any science as that caused by a feeling that you are not strong enough to master it—a dejection usually induced and strengthened by finding that the books you have to study are dry, repulsive, and entangled. You knew they contain the solid materials of the edifice, but you feel as if the master builder had not rendered them smooth, nor put them into the positions to facilitate your fixing them in their right place, and retaining them there, and that you never could succeed in doing so. By no one is this dejection more usually felt than by the student of geology, and we opened the volumes now before us fearing that they would have the radical defect of their predecessors. We had a better hope when we saw that one volume had reached its seventh edition in less than twice as many years, and that the other volume had entered its fourth edition in a still shorter time. That hope was realised by placing the "Introductory Text Book" in the hands of one who had no knowledge of geology, and by our observing that he continued to read it until the night was far advanced, and that he renewed his perusing in the morning.

The test was truthful, for we find that both Mr. Page's volumes are the most lucid instructors in geology we ever read. They present well-combined agreeableness, fullness, and accuracy of detail.

Every science must have a nomenclature to facilitate description, and when such nomenclatures are employed unexplained in introductory books, they weigh down the student, by fatiguing his memory in the oft-foiled effort to retain uncouth, and to him unintelligible names. Dr. Page has avoided this; he uses the geological nomenclature sparingly, and where he uses it he interprets it. We remember the disgust of a student who could not find an answer to his inquiry, "Why is it called the Oolite system?" Dr. Page in one sentence explains it. "It derives its name from the rounded concretionary grains which compose many of its limestones—these grains resembling the roe or egg of a fish, *oon*, an egg, and *lithos*, a stone." Such explanations aid the memory, for that is best remembered which is best understood. But Dr. Page has adopted another help to the memory, by appending to each chapter a "Recapitulation," being a succinct compendium of the chapter's contents, acting as an examination and refresher.

It is needless to particularise the scientific details and arrangement of the two volumes, for they are in unison with those of the best and most recent researches, but as what is meant by "industrial" geology, may not be apparent, we will give one illustrative extract, and it shall be from the "Advanced Text Book," relative to the strata we have already noticed—the oolitic.

"Some of the oolitic strata, like those of Bath and Portland, form excellent building-stone, and are extensively used for that purpose in

the south of England. The well-known Chert stone is also a member of the same group; while paving-stones and roofing-slabs are obtained from some of its fissile sandstones (Stonesfield, Collyweston, &c.), and also from those of the Wealden at Purbeck, and other parts of Sussex. Both the lias and oolite limestones are largely quarried for mortar; and the former, which generally contain from 80 to 90 per cent. of carbonate, with clay and oxide of iron, when well prepared, furnish an excellent hydraulic cement. Marbles of various quality are procured from the lower beds of the Weald, in Sussex ('Sussex or Petworth marble'), and in Purbeck ('Purbeck marble'); and also from some of the coralline and shelly oolites, as at Whichwood Forest, in Oxfordshire, whence the term 'Forest marble.' The finer kinds of lias receive a polish, and have been tried with indifferent success for lithographic blocks—the chief supply of which has long been obtained from the oolitic beds of Solenhofen and Diebstadt, in the centre of the German Jura. The pyritic clays and shales of the Yorkshire lias yield on proper treatment sulphate of alumina (the *alum* of commerce), which at one time was also obtained from the Kimmeridge clay; and during the sulphur monopoly of Sicily, several patents were taken for the extraction of sulphur from the same pyritic (sulphuret of iron) liassic strata. Fuller's earth—which is essentially composed of silica, alumina, and about 24 per cent. of water, and like other aluminous marls possesses in a high degree the property of absorbing grease—is a product of the upper oolite, and was at one time extensively used in the cleansing and scouring of woollens. Iron was at one time extracted from the nodules and pisiform iron-sands of the Wealden; ironstone of workable quality occurs in the oolites of Yorkshire, and has long been gathered along the shores of the same county from the waste of the lias cliffs. The great ironstone treasury of the system, however, is the 'Lias band' of Yorkshire. 'Within the last few years,' says Phillips, 'this band, often 16 feet thick, and of good quality, has been worked to great advantage at Eston, and other points in Cleveland [where, we may add, it is creating quite a revolution in the appearance and industry of the country], as well as at Gromont Bridge, in Eskdale. The area under which this bed may be worked measures some hundreds of square miles, with an average produce of 20,000 to 50,000 tons per acre. It dies out southwards, and vanishes about Thirsk; but there other ironstones acquire value in the oolite series above.' A bituminous shale, or brown shaly coal, with a specific gravity of about 1.32, and burning with a dull smoky flame, occurs in the Kimmeridge clay, under the name of 'Kim coal,' and has been worked for the extraction of paraffine, &c.; and jet (which is simply altered coniferous wood) is found both in the wealden and lias. Seams of coal, which are sometimes workable, occur in the system, as in the oolite at Gristhorpe, in Yorkshire; at Brora, in Sutherlandshire; at several places in the German wealdens, from 2 to 3 feet thick; on the southern flanks of the Caucasus; in the East India oolites; and notably at Richmond, in Virginia, where a valuable field extends about twenty-six miles in length, and from four to twelve in breadth."

DENDROBIUM DENSIFLORUM.

ALTHOUGH it blossoms at a time when flowers are scarce, this handsome plant is not so much cultivated as it deserves to be, as nothing can well surpass a plant which we have now in flower, there being twenty-four spikes of fully-expanded flowers, each spike as large and three times as dense as that of the *Laburnum*, which they somewhat resemble. The plant is also of compact growth, the highest portion not being more than 15 or 18 inches above the pot, while it is upwards of 2 feet through, and the beautiful racemes almost entirely cover it. The colour, as is well known, is a sort of apricot yellow. Besides the spikes new out, about a dozen others are more or less advanced, giving promise of a lengthened period of flowering.

An ordinary stove seems to suit this *Dendrobium* very well, as the plant described has never been kept so hot as recommended for some of the same genus; still, it is kept warmer than these for which cool treatment is advised. As flowers in November are not over-plentiful, a handsome one, such as *Dendrobium densiflorum* is, cannot be too highly recommended.—J. R.

GISHURST COMPOUND.

READING my JOURNAL of HORTICULTURE of October 31st, I noticed Mr. Pearson's trials of scale remedies, and regretted, if he desired to make a fair comparison between different specifics, that he only sponged with Gishurst compound, while he dipped—by far the most effectual mode of treatment—in the insecticide. I also regretted, as his "boys were disgusted," that the Gishurst solution had not been made, as recommended, forty-eight hours before use, by which strong smell is removed. I then, on November 7th, read "T. R.'s" report of many remedies which his great experience has led him to adopt, mentioning Gishurst only against American blight on Apple trees. In the number for November 21st Mr.

Pearson again brings up Gishurst compound, saying that it required so many repetitions of treatment that plants requiring much more of such attention would have found their way to the rubbish-heap.

Gishurst compound having now held its own with the highest-class gardeners for more than eight years, outliving many preparations "vastly superior," I have latterly left it to fight its own battles, but this experience of Mr. Pearson's tempts me to break my good resolution; it is so diametrically opposite to that of the Orange growers in Australia, where, owing to the absence of cold, blight lives and breeds all the year through. Mr. Carson's report on Orange trees, quoted some years back in your paper, entirely differs from Mr. Pearson's, and concludes by saying that Apple trees were so much infested that their cultivation was being discontinued (on the road to the rubbish-heap), and that they had more than doubled in price since Gishurst compound had been found an effectual remedy.—THE INVENTOR OF GISHURST.

NUNEHAM PARK.

(Concluded from page 352.)

THE kitchen gardens are eight acres in extent, and the pleasure grounds cover thirty-three acres. Passing out of the former by a door in the Ivy-covered wall, crossing a road, and going through some evergreens, I reached the rosery. No flower in the garden is quite equal to the Rose, but the end of September is not the most favourable time to visit a rosery; still enough of beauty and fragrance remained to convince me how pleasant it must have been to linger on the spot when the Roses were in full blossom. In form it is a large circle, having for its centre a triangular trellised seat or bower, with iron uprights supporting chains covered with climbing Roses, surrounding which, and for the greater part of the plan, are flowing devices in beds of Roses, among which are stone pedestals bearing figures, and statuettes also of stone. Other more formal beds of flower garden plants, in single line, complete the plan within the circular main gravel walk; and then there was a ribbon arrangement composed of *Cerastium tomentosum*, with *Campanula carpatia*, very effective here, much more so than the sister-coloured *Viola cornuta* could have been, and so I should think it would be anywhere, as the flowers are larger and more even in outline. The other plants employed were *Amaranthus melancholicus ruber*, which looked very melancholy indeed, *Scarlet Pelargoniums*, red *Salvias*, *Roses*, *Dahlias*, and *Sunflowers*, the last apparently looking down approvingly. An occasional sub-tropical plant held a position around; for example, *Brugmansias*, with their sweet, white, enamelled, post-horn-looking flowers, and noble foliage; *Ficus elastica*, *Cannas*, *Castor Oil plants*, and *Acacia lophantha*. Varieties of *Crategus* bearing their large bunches of haws of different colours, *Arbor Vitas*, and *Hollies* slope upwards all round, so as to embrace at last the forest trees completely screening this pretty retired spot.

I believe I may state that Mr. Stewart intends to sacrifice the *Cerastium tomentosum* which now borders some of these beds for the Variegated *Alyssum*, as the former "will not stand the shears." *Amaranthus melancholicus ruber* was also to be replaced by a *Coleus*. The *Brugmansias* when taken up are well cut back, root and branch; they are then placed under the stage of the greenhouse during winter, and merely allowed the protection of the glass-roofed shed for five or six weeks, to encourage slight growth before they are planted out again in the beginning of June. At the taking-up of the *Acacia lophantha* more care is required—I advised having the roots cut and kept within bounds during the summer—and the branches must be left entire. *Cannas* may be treated in the same way as the *Brugmansias*. The *Indianrubber plants* were plunged in their pots.

Passing along a walk bordered with evergreens, from which every unhealthy spray and dead leaf was cut off, we emerged into a delightful part of the pleasure grounds, containing specimens of evergreens, which might lead one to fancy himself in the south of Devonshire—say at Lady Rolle's, Bieton; or Sir Trayton Drake's, Lympstone, had the *Maguolias* only been there. Fine deciduous trees, as well as some statues, are also dispersed over the greensward, which is, at well-chosen places, lighted up by brilliant beds of flowers.

I had now arrived at the spot where once stood the orangery, the absence of which Mr. Stewart seemed to regret, but there is much left to compensate for the loss of it. The pavement

and back wall of the orangery remain, and against the latter are arbour seats, ornamented with trelliswork, covered with a lovely, sweet-scented, white-blossomed, Jasmine-looking *Clematis*, supported on each side by Orange trees, *Scarlet Pelargoniums*, &c., with a background of gracefully weeping *Humea elegans*. The walk in front is founded in stone slabs, and flanked with carved stone balustrades, which are divided to allow of access to the centre of a terrace gravel walk. Immediately alongside of this were two long parallelogram flower-borders, carpeted with *Viola cornuta* in full bloom, and bordered with *Iresine Herbstii*, having along the centre thirteen round raised bosses. Of these four were of Golden Fleece *Pelargonium*, four of Mrs. Pollock, two of Madame Vaucher, one of Pink Stella, one of Christine, and one of Comte de Morny. A shallow flight of steps leads from these beds to an expanse of close-shaven lawn immediately at the bottom, where a handsome vase of *Scarlet Pelargoniums*, raised upon a stone pedestal, confronted one, being, perhaps, just a little out of place there.

Following a gravel walk from the orangery, and passing through a scene of beauty towards the north wing of the mansion, I arrived at the north-terrace geometrical flower garden, which required fully an hour to do it justice. Its general effect was very good. *Calceolaria Anrea floribunda* attracted the eye, and monopolised my attention, being in such splendid bloom. *Iresine Herbstii* in Mr. Stewart's hands is a thing of beauty, whether grown as a bordering to beds or as huge specimen plants in pots; and trained around the *Calceolaria*, the two formed the most "telling" bed I have seen anywhere this year. There was another bed in the design, towards the outside, which I would have liked to have made change places with the preceding, being, as I thought, a quiet pleasing combination. This was planted with *Osborn's Brilliant Pelargonium*, with its leaves of, say a lavender tinge, slightly silvered at the edges, giving a pleasing air of lightness to the red blossoms, and edged with *Golden Fleece Pelargonium*, which here does extremely well.

My eyes next rested upon a refreshing, old-fashioned, mixed border of flowers, among which, producing an abundance of fine trusses of bloom, were specimens on trial of *Victor Emmanuel*, *Roi d'Italie*, and *Lord Palmerston* (*Nosegay*) *Pelargoniums*; also some of Mr. Stewart's seedlings. After glancing at the vases, filled with *Nosegay* and *Ivy-leaved Pelargoniums*, I walked along the stone-balustraded terrace in front of the mansion, whence fine views are obtained of Oxford, with its domes and spires, to the right, of Abingdon to the left, and of the "silver Thames," here called Isis.

Looking over the balustrade I noticed a croquet ground, which is the most perfect of its kind that I remember, not even excepting that lately formed by Mr. Johnson, at Savernake Park, the seat of the Marquis of Ailesbury. In shape the croquet ground at Nuneham is a large oval, with a further extent of turf on which to stroll, recline, or knock the balls about, without fear of destroying any bedding plants, and with them, perhaps, a year's hope and labour of the gardener. The grass is kept closely mown by machines, each drawn by two men without any one to guide it, thus saving labour; and practice soon accustoms the men to perform the operation to a nicety.

Shade of Capability Brown! you who in the flesh planned these fine parterres, I wonder whether you would approve of those fine Elm trees, which have grown up so near, and which so obstruct the view? To be sure I am quite a stranger, and I do not know what the effect might be when the leaves are gone. At any rate, on the supposition that you thus revisit this, one of your chief works, those who are now living upon the spot and responsible, may be satisfied that you are not wringing shadowy hands in despair on account of the ground not being well and liberally kept. The combined whole, as viewed from the terraces, is what an excitable person would call "ravishing!" but that quick sharp way of expressing it does not satisfy me.

But I must hasten on to the south terrace, where other symmetrical arrangements in more strict harmony of colour present themselves in duplicate. The designs had for their centres two vases on pedestals filled with Mrs. Pollock *Pelargonium* and mixed flowers, flanked by beds of yellow *Calceolarias* and *Honeycomb Pelargonium*, bordered with *Dandy*. I felt, however, that it would be impossible for me to do justice if I attempted to make a minute description in my limited time: therefore I singled out a few of the beds which I thought most beautiful—viz., *Perfection Pelargonium*, edged with *Flower of Spring*; *Stella*, edged with *Flower of Spring*; *Italia Unita*, with *Dandy*; *Christine*, with Mrs. Pollock; and *Golden Fleece*,

edged with a blue Lobelia—a very good variety, a seedling, I believe, raised by Mr. Stewart, but it was just past its prime. And now, what have we here? A bed of fine Mrs. Pellock Pelargonium, bordered with Polemonium caruleum variegatum, poor "old Charity," or "Jacob's Ladder," of our grandmothers. Mr. Stewart thought the bed was not correct, and I do not think he admired my taste in the bed of Osborn's Brilliant and Golden Fleece; but, be that as it may, I have these two beds down in my mind as being very remarkable. Four vases, two at each end, were filled with fine well-bloomed plants of Madame Vaucher Pelargonium. Southward, in the distance, is seen an old Gothic conduit, which formerly stood in Carfax, Oxford. It was presented to the late Lord Harecourt, and is very happily placed.

Not having time to visit "Brown's Walk" and the arboretum, Mr. Stewart and I returned, passing on our way seats by the mansion, embowered with Jasmine, Roses, and Wistarias, the latter extending over a bend in the mansion called the corridor. Twenty-six fine stone vases, filled with Scarlet Pelargoniums, were placed at equal distances along the whole length of the mansion upon the balustrading of the terraces, and served to light up the substantial carved stonework admirably.

Descending by stone steps at the end of the west terrace, we turned, passed the north terrace above, and proceeded along a gravel walk, with fine specimens of Scarlet Thorns upon the lawn to the left. I was then surprised at the fine piece of artistic setting which the orangery forms when seen at a distance, with fine deciduous trees, evergreens, statuary, and greensward as accessories.

Passing a temple to Flora, now a round bed of bright Scarlet Pelargoniums, having for a centre that mischievous imp, with bow fully bent for mischief, only luckily transfixed in stone, I arrived at a temple with a real presiding nymph, who was attending to the mundane matters of milk and cream in pans and bowls of china; and now, crossing the road once more into the kitchen garden, I am made aware of a long narrow slip against the wall, used as a nursery for spring bedding plants, which are protected from the road by palings. Really every spare nook and corner seems to be made to accommodate choice and common varieties of early border plants. How bright and gay the beds and grounds must look in spring! and when those flowers unfold their bloom, "may I be there to see."—UPWARDS AND ONWARDS.

PROLIFEROUS FERNS.

UNDER this title I have to offer a few remarks, which may be interesting to some of the readers of the Journal. The following are the British Polystichums grown here—viz., *lonchitis*, *aculeatum*, *lobatum*, *angulare*, *angulare angustatum*, *lonchitoides*, and *angulare proliferum*.

Having carefully examined all the above kinds, I can only find two of them proliferous—viz., *angulare angustatum*, and *angulare proliferum*; the latter being very proliferous. From it I send you a frond as a fair specimen covered with bulbils at the rachis, which when pegged down to the soil root freely, and the stock may be increased to hundreds in a short time, either in the open air fernery, or in pots. I have here a very fine specimen of *P. angulare proliferum* in a pot, which I may safely say has now upwards of one hundred bulbils on the rachis of the fronds.—G. WILLERS, Cambridge.

We are still, I think, far from having arrived at any satisfactory conclusion with regard to "cause and effect," as exemplified in proliferous Ferns. It is certainly one step in the right direction, if we can prove that no British Fern is proliferous in its wild state.

Of the exact history of the first proliferous Fern found in Britain—*Polystichum angulare proliferum*, found by Mr. Choules, of Kew—I know nothing beyond that when first found it was supposed to be the foreign species *discretum*; and, I believe, Mr. Choules's plant went by this name till the year 1852, when Mr. George Wollaston found a plant like the supposed foreign *P. discretum*, but far exceeding it in grace and beauty. Of this plant Mr. Wollaston thus writes, "I found it in 1852, near Ottery St. Mary, Devonshire, in company with the Rev. —, of which I was glad, as a witness to the fact, for until then it had been considered as probably an exotic Fern, and was in the Kew collection as *Polystichum discretum*. It, doubtless, had bulbillæ upon it when I found it, but I did

not perceive them until I had it a month or two. It was under pot culture for perhaps five or six years, when I turned it out into the garden, where you may remember to have seen it, and where it has remained ever since." Mr. Wollaston then adds, "Proliferous growth is extremely common in exotic Ferns, but I believe I have the honour of discovering our British Ferns to be so. The cause is a hidden mystery to me, but I may assert, I believe without fear of contradiction, that dampness of atmosphere contributes greatly to its development, in a similar way that it does to the roots of plants." In another letter Mr. Wollaston, who resides near London, adds, "*P. angulare proliferum* Wollastoni, has rarely more than one or two pairs of bulbillæ on the stipes." In my plant of Wollastoni, grown in the damp atmosphere of Devonshire, there are bulbils half way up the frond.

Now, with regard to this proliferous plant, I must so far differ from Mr. Wollaston, as to suggest that if the Fern, when found, had been proliferous, so keen a hunter as Mr. Wollaston has ever proved himself to be would have perceived it. I venture, therefore, to conclude that no bulbils were there.

Far exceeding Wollastoni in beauty is the variety *proliferum* Holeanum. This lovely form was found some five or six years since by the gardener of Mrs. Hole, of Bovey Tracey, Devonshire. It was growing in the immediate neighbourhood of Bovey, and attracted instant observation by the extreme beauty of the foliage.

Of this Fern, Mrs. Hole thus writes: "My gardener found the variety Holeanum; he did not see bulbils on it. I sent it to a great Fern fancier at Exeter, and in his possession the bulbils were first discovered. I have some lovely plants now, with the young plants showing their little delicate fronds for at least a foot and a half up the frond."

About two years since a *Polystichum angulare* was found near Okehampton, Devonshire, by Miss Seymour, which was sent to me for my opinion. It was then too young to determine what variety the Fern might prove to be. I could only answer for its not being normal. This year a more mature frond was sent, the plant having in the meantime been cultivated in a drawing-room. On further examination, the Fern, which was weak, and much drawn out in the pinna, proved to be identical with the variety Holeanum, as far as the tripinnate, feathery character of the frond went, and I also fancied I distinctly traced incipient bulbils up the rachis. Should this beautiful specimen turn out to be proliferous, it must be called *proliferum* Holeanum No. 2, but if the bulbils are not forthcoming, I propose to name it *tripinnatum* Seymouriæ. The plant is now put out of doors, where the dampness of the Devonshire climate may help to develop its proliferous character, if, as I suspect, the character is lying dormant in the Fern. Miss Seymour's plant was found on a dry bank near the town of Okehampton.

In the variety *biserrato-proliferum*, found by myself, the bulbils did not show till the plant had been in cultivation for some months.

Last year, I found in a dry Holly hedge at Bovey, a lovely Fern, to which Mr. Wollaston gave the name of *pulchrum* Bellairsiæ; but I have a suspicion that this plant will become proliferous in cultivation, and may be a No. 3 Holeanum.

"W. O.B." states that two plants of *Polystichum angulare* in his possession have become proliferous in cultivation, though he disclaims for them the honour of being considered distinct varieties—an honour which I believe is surely theirs.

"W. O.B." also mentions that *P. angulare*, vars. *lineare*, *eristatum*, *interruptum*, and *oxyphyllum*, have become proliferous with him. *P. angulare proliferum* *lineare* is a true proliferous form, originally found in North Devonshire by the Rev. C. Padley.

The testimony of "J. E. M." seems to coincide with that of "W. O.B." and also of Mr. Wollaston, that dampness of atmosphere helps to the full development of the proliferous character.

I would point to yet another cause. I believe the development of the proliferous character in Ferns to be an effort of Nature to throw off exuberant health. Flowering plants have the future flowers on which to expend any superfluous life; some plants throw it into the roots, but the more natural way is to send it upwards in the sap, which nourishes the plant. In each instance of proliferous Ferns that has come before me, the Fern which has shown this characteristic has been suddenly transplanted from a dry and starved soil, into rich garden mould, peat or other. The Fern cannot grow fast enough to exhaust this additional nourishment, and Nature furnishes the safety valve of bulbils. The dampness of the atmosphere is, of

course, so much to drink, added to the feast of fat things provided by the soil.

How the proliferous character is sustained, and for how long a period it continues, I have no means of judging. At present, all the thousand, I might say million, young plants of *Wollastoni* and *Holeanum* show the same proliferous habit that obtains in the parent plant.

I have never heard of Ferns planted out of doors in the north of England becoming proliferous, and on a specimen of Mr. Choules's plant which I had in a Warwickshire fernery, I never observed bulbs till it was removed to the more warm and damp climate of Devonshire.

I think we may safely add to the list of thirteen proliferous varieties of *Polystichum angulare*, which I gave in a former number.

14, *Polystichum angulare proliferum oxyphyllum*.

15, *Polystichum angulare cristato-proliferum*.

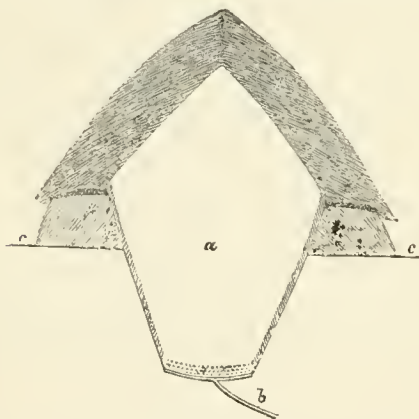
16, *Polystichum angulare interrupto-proliferum*.

17, *Polystichum angulare sub-tripinnato-proliferum*.

Would "J. E. M." kindly give a list of all the proliferous Ferns (*Scolopendrium vulgare*, and others) which have become proliferous under cultivation?—*FILIX-FEMINA*.

STORING ICE.

As the season for storing ice is fast approaching, and as in your answer to "A POOR COUNTRYMAN," you hinted that the discussion of the subject would be appropriate at this time, I have ventured to send you a rough sketch of a pit which I made at this place last autumn, as a supplement to the ice-house. It was filled in January, and has kept the ice up to the present time, having supplied the wants of a large family during the summer.



The ice-pit, *a*, was made under the shade of trees, and near the edge of a bank. For facility of drainage, the drain, *b*, terminates in a dumb well covered with soil to exclude air. The soil that comes out in the process of excavation forms a bank round the pit, and increases the depth. The ice is well broken, piled up to a cone in the centre, and thatched with straw, which should not be less than 2 feet in thickness, and over all there is a covering of Spruce branches. A little fresh straw should be placed next the ice when the pit is opened for supply, as the original covering decays towards autumn. The pit is 12 feet in diameter at the ground line, *c*, and about 8 feet deep, but it could be made either more or less, according to the quantity of ice which would be wanted.—A. KERR, Gardener, Netherby Hall, Cumberland.

WALL PEACH TREES.

SOME time in September last a letter by some means got into the columns of the *Times*, reminding its readers that odd things are sometimes admitted to its columns: witness the stir made in the agricultural world by Mr. Hullett when he described his "new cereal" in the *Times*, and by which some few profited largely at the expense of too many honest people. The letter I allude to professed to give an account of French gardening, contrasting it with English methods of cultivation, more particularly that followed by both nations in the culture of the

Pear and the Peach. As far as I recollect, the writer of the article seemed to be young in using his pen, for he had the imprudence to say, after noticing the Peach trees at Montreuil, that in England the ghost of a Peach might occasionally be seen straggling over a wall, and that that straggling growth and rude training were the normal state of our wall Peach trees as compared with the perfect trees he saw at Montreuil. At the time, this seemed to me a gross libel on English gardens and gardeners; but I believe now that the meaning of the sentence was not comprehended by the writer, so that it may pass as harmless but imprudent.

When reading about these Montreuil Peach trees my memory returned to those admirable reports on French horticulture given a few years since by Mr. R. Thompson, the experienced cultivator at the Horticultural Gardens, Chiswick, who carefully compared the systems of training followed in France and England, giving to each the merit due. This report of Mr. Thompson's ought to be republished, it is so replete with close observation and temperate reasoning, and, above all, he figured so correctly any object requiring illustration. I have an idea that its republication would be useful as a guide to young writers, who are apt to judge with haste and incompetency.

My principal motive for writing this is to request that some of your numerous professional readers will mention a few out of our numerous English gardens in which wall Peach trees are otherwise than ghosts of trees, so that the Montreuil trainers may come and see our English system, and help to refute the libel of the writer of the article in the *Times* on English wall Peach trees.—A STAY-AT-HOME GARDENER.

NOTES AND GLEANINGS.

MESSRS. PETER LAWSON & SONS have sent us specimens of a new sprouting Cabbage, which differs from anything of the kind we have seen before, inasmuch as the sprouts unlike those of Dalmeny Sprouts, are large, and more like young spring Cabbages than Sprouts. Of these there are several on a stock, intermixed with some small ones like Dalmeny Sprouts. When cooked they are very tender and excellent, with much of the winter-Cabbage flavour of *Couve Tronchuda*. Their Curled Kale, of which they also sent specimens, is a fine sample of that useful vegetable; but as it requires to have the frost upon it to bring out the right flavour, we tasted it under circumstances that did not conduce to give the best experience of its flavour.

WORK FOR THE WEEK.

KITCHEN GARDEN.

PREPARE ground for new plantations if such are to be made. Trench well, and apply manure liberally, for it is found better to enrich the ground well at first than to trust to subsequent top-dressings. *Celery* that is finally earthed-up should be protected by straw or dry turf laid close to the tops; or, still better, thatched hurdles might be prepared and placed so as to slope over the tops of the plants. *Endive*, take up with a good ball of earth and plant in frames. *Lettuce*, the proper preservation of salads is one of the most important winter duties of a gardener, and great differences exist in practice in this matter. The old Dutch mode of procuring good Lettuce throughout the winter is well known—indeed, many are acquainted with it who are not able to practise it, owing to the want of spare frames or pits. Those who desire to have good Lettuce in this way need be under no apprehension of the difficulty, provided they are willing to incur the expense of frames. However, for ordinary purposes, the best way is to grow a considerable breadth of Lettuces from the early August sowings. The plants being tied and blanched in October, may be taken up, laid in by the roots close together, and covered with straw mats. The same may be said of *Endive*. Two points are very necessary—viz., to promote the circulation of dry air or winds through the plants at all times, and to keep out frost.

FRUIT GARDEN.

Whilst the weather continues mild pruning and nailing may be continued. It is rarely the case that Peach trees are in any degree injured by being pruned before winter, for injury can only happen when the wood is immature and the frost very severe. On the other hand pruning in spring, when the sap is flowing, has invariably a weakening effect on the trees. In heading-back trees recently planted, or in shortening vigorous shoots, it is advisable not to cut too close to a bud from

which it is important that a principal branch or leader should proceed; it is better to cut nearly a bud higher, and in spring a fresh cut can be made closer to the bud below. Now that the leaves are fallen, inspect Apple trees, lest any American blight should have escaped former dressings, and if so, prune the trees and apply naptha to such places as are infested.

FLOWER GARDEN.

Rustic baskets and vases filled with plants last summer should have the soil taken out of them, in order to keep them from being injured by frost, and to prepare them for receiving fresh soil next spring. Fuchsias and other half-hardy plants that have been killed down will now require to have their roots mulched to keep the frost from injuring them. New work, if any, should be proceeded with during this fine weather; planting should also be carried on. Where shrubberies are too crowded take up some of the best specimens and transplant them, and cut down inferior sorts. Rose stocks should be procured forthwith, and planted in rich soil for budding purposes. Examine pillar and trellis Roses, and see if the soil wants renewing, or the kinds changing. Large holes, capable of containing three or four barrowloads of soil, should be made for choice kinds. Sound turfy loam is the chief requisite; to this add a portion of rich rotten manure, and, if at hand, a little sandy peat or leaf soil. The florist's labours are, to a great extent, drawing to a close for the present. His Tulips are safely planted, his Carnations and Picotees framed and in their winter quarters, Ranunculuses are out of harm's way, Dahlias are out of the ground, labelled, and stored away till the period arrives to start them afresh, and the chief demand on his time and attention is to give air to his plants, both to Carnations and Auriculas whenever possible. Frost is not so detrimental to either of the above hardy plants as dampness; this must be avoided as much as possible; they will want but little water, but when this is applied let it be effectually, and in the morning. Tulips also will require to be covered up, or to have other protection during excessive frost, though many growers neglect this precaution till the plants are fairly out of the ground.

GREENHOUSE AND CONSERVATORY.

The conservatory being now gay, care must be taken in the very first place that all drip from the roof be avoided. To accomplish this very little water must be applied in any way, except that which is absolutely necessary at the root. However, under these circumstances a very moderate amount of atmospheric heat must be allowed; for whatever heat is allowed there must be atmospheric moisture, or the plants will soon show marks of debility; therefore it is advisable from the end of November until the early part of February to keep as low a temperature as possible, consistently with the main object in view—viz., enabling plants with duly organised buds to develop their blossoms in a proper way. A still atmosphere must be maintained. The ventilation should be moderate, and a temperature of from 45° to 55° by day, and from 40° to 45° by night, will be sufficient for the present. Be very cautious in applying fires to Heaths; nothing so much injures this tribe of plants as the application of artificial heat. They can bear a considerable degree of cold and some frost without sustaining any injury, but they cannot withstand the drying influences of fire heat. Very little water will now be required, especially for the large specimens, which must be very particularly examined as to dryness previous to any application of water.

STOVE.

Keep the temperature rather low than otherwise, that no new growth may be promoted. Much more injury is likely to result from a high temperature at this season than is generally supposed; 60° by fire heat will be ample for all stove plants. Continue to look sharply after mealy bug, scale, and other insects. This is the season more especially when stove plants can be thoroughly cleaned.

FORCING-PIT.

Keep the heat at 65° at night, with moisture, and never neglect to fill up every corner of this useful structure, for on it the greater portion of the floral display for some months depends. Procure all kinds of Dutch bulbs, American and other flowering shrubs, Lilies of the Valley, Heliotropes, Pinks, Roses, and, in fact, all kinds of plants which are usually forced for decorating the conservatory and drawing-room. Keep down green fly by occasional fumigations of tobacco. In a mere pit of fermenting matter a very free ventilation must occasionally be allowed, or the moisture will be overpowering. A bottom heat of 75° ought to be secured; this is indispensable. The pots should be about half plunged in the old tan. Keep the

atmospheric heat very low at first, about 55° to 60° in the day, with as much air as can be managed, and from 50° to 55° at night, still leaving air more or less.

PITS AND FRAMES.

As the nights are now cold the lights should be closed at night, and the frames well covered with mats and litter if required, avoiding fire heat until it is absolutely necessary. Every fine day look carefully over plants requiring water, but avoid water at this season in dull weather. If the soil in the pots has become green on the surface it should be carefully removed with the point of a small stick; this must be done in mild weather.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Cabbages.—Filled up a few vacancies in our Cabbage quarter, planted at three different times to afford a succession of gatherings, as, notwithstanding our wire netting, some rabbits had gone in for a nibbling. These marauders, however, often find their way in by garden doors, left open for convenience for the greater part of the day; and doors and gates that ought to be kept shut, unless when ingress and egress are wanted, are so apt to be left open. "Shut the door" is an easy maxim, but it is not so easy of fulfilment. At one time, to bring matters more into shape and order, small fines were imposed for small shortcomings—as going out with insufficient tools, taking tools to the shed dirty, stepping on a walk with dirty boots, taking a dirty barrow wheel over a walk, or on a walk at all, when it could be avoided, and one of these fines was for leaving a certain door open behind one; for that we were every now and then fined ourselves. We had a strong suspicion that if we passed that way some sly rogue made his way to the door and set it open; but nevertheless we had strong proofs that we had left doors open which we wished particularly to be kept shut, and when it was scarcely possible for any one else to come after us. Such involuntary personal failings ought to make us more charitable to the shortcomings of others, though insisting all the same on what is right being done.

We may here state, that to carry out well a system of fines, three things are necessary—first, the sum should be small, such as 1d. or 2d.; secondly, one of the best men should be recorder and receiver; and thirdly, at stated intervals the sum collected should be used as the general vote of the men may determine, so that no advantage from these fines should accrue to the master or proprietor. Our system fell into disuse, because at length fines became so rarely necessary, though every man looked sharply after his neighbour. We sometimes think it would be well to revert to them again. It was astonishing how well the system worked, and how keenly every man took hold of a slip in his fellow-workman; and we do not recollect of a single unpleasantness.

We allude to the subject of keeping doors and gates shut when not in use, as a hare or a rabbit is as anxious to make its way into a fresh enclosure, as a bird is to see what is protected under a net. With such prudence, and with good fences, much may be done to keep these intruders at bay.

Colewort Cabbages when young are almost as hardy as the common Cabbages, but when at this season they produce their flat crisp heads, they are easily injured by frost, and when that threatens to be severe, it is wise policy to lift such plants, remove only a few of the lower leaves, and lay them in, in a turf-pit or border, thick enough just for the heads to meet, protect with litter, &c., when needed, and uncover in fine weather. Such precautions make the winter pass more easily. They will need less care than the Cauliflowers alluded to last week, but even in their case, as well as in that of

Endive which we had taken up and placed in an earth-pit, lifting with good balls, we soon saw the necessity of frightening rats to a distance, as they had begun upon the hearts of the Cauliflowers, and had nipped out the centres of some of the best Endive. Besides trapping, &c., we took advantage of the cleanly habits of the animal and scattered tar both inside and outside of the earth-pit, so that the rats without burrowing could not pass in without crossing the tar, the smell of which is also offensive to them. Now, such tar sprinkled inside, even close to the back and front of an earth or turf-pit, would do no harm at this season, but let no one imagine he could place tar in a pit or frame with artificial heat, where plants of a more tender nature are kept. In this case, most likely, the fumes of the tar would be destructive in the close atmosphere. We

have had many instances in which a rat will not cross a band of tar outside of a frame, pit, or house, but we have also met with instances in which they have commenced operations a foot behind the line of tar and burrowed an entrance beneath it; but they will rarely come out at that entrance if you leave the taint of your presence near it.

We may say in addition, with respect to young Colewort Cabbages planted in beds thickly—that is to say, from 9 to 12 inches apart, and which are now beginning to show their little broad bonnet-heads, that instead of taking them up, as stated above, we have found it a good plan to draw a little long litter on the ground between the plants, and to those who have not tried it, it is astonishing how little of this litter-covering of the ground tends to arrest the radiation of heat and thus preserve things, even when the top is exposed to a severe frost, and that, too, may be counteracted by having a heap of litter or fern ready to shake thinly over the bed when severe frost comes. Without such care we have had a bed of these Cabbages, every half dozen of which would have made a rich, tender dish, little better than a mass of rottenness; whilst with such attention a neighbouring bed that had the litter removed a couple of days after the frost was gone, looked as fresh and green as a piece of lawn that had been covered with 2 or 3 inches of snow before the severe frost came.

Broccoli.—Tall plants that have been at all drawn should have the heads inclined towards the north or the east, so as to bring them near the ground, and the slope given to the leaves will also act as a great protection to the centre, or the head formed or forming. The best way to do this is to begin at one end of the row, take out an opening beyond the plant, press down the stem into the opening, and then cover the stem with earth to keep it down. Success will depend on doing this without injuring the roots. In the case of dwarf Broccoli this might also be done, though with but little bending of the stem; but in their case if we had the means, besides stirring the surface soil and hanking it against the stems, we would cover the soil near the stems with litter, and have some of the driest and cleanest, or old musty hay, fern, pea-straw, &c., to put a handful over the centre of each plant. By such means large pieces have been preserved, whilst others left to themselves have been destroyed. Besides the Walcheren, Grange's Cauliflower Broccoli, and Snow's Winter Broccoli, valuable through mild winters, the late sorts are worthy of this attention, as furnishing a rich supply in spring before the earliest Cauliflowers come in.

With all this care private gardens in the north can hardly be expected to equal the supply of Covent Garden, which has its stores of these vegetables brought from the southern counties and the Channel Islands, where anything like the severe frosts of the north are unknown. In climates where the Myrtle, the Fuchsia, the Hydrangea, &c., are almost as uninjured as our Oaks and our Beeches, the whole practice of protection out of doors must be next to unknown to the fortunate gardeners. In colder and less propitious climates, however, there must be an outlay for labour and protection, if the country gardener in the north is to approach the metropolitan supply. The gardener may not know it, but many employers regularly look at the supplies in Covent Garden, and compare and contrast with their own, altogether forgetting the dissimilarity of natural circumstances from which the supplies come; and they are apt to grudge the labour and expense involved in producing early vegetables, when these must be protected or grown under glass and on hotbeds, while London is supplied from the free open air, somewhere hundreds of miles farther south.

But for the superior quality of vegetables, and even fruit, fresh gathered, there is no doubt that early productions could be carried from south to north, and sold much cheaper than they could be raised in the north, and were gentlemen and ladies satisfied with them and content to purchase, much labour and care would be saved. By such means the market towns south of London, for instance, are often liberally supplied with early Potatoes before the people in such places have finished planting them in their gardens and fields. Of the quality of such tubers after their long journey we say nothing, but even that quality might be improved. The Pine Apples brought at first from the West India Islands, were but poor at the best, but now they come in very good condition, and though not equal to those of English growth, still they are Pine Apples, and many of them handsome enough to look at—the chief use to which Pine Apples are devoted, even at the tables of our aristocracy. Be this as it may, the bringing of Pine Apples from their natural climates did much to arrest Pine-growing in

this country, and if it is now beginning to be more general, it is from the desire to have them to decorate the dessert-table when foreign ones cannot be obtained.

It is “a long cry” from Broccoli to Pine Apples, but the principle involved is the same. Everything will in time come to its natural level. The Pine grower here cannot compete in price with the foreigner; he must try to have his supply where he has not to contend with importations. Winter Cauliflowers and early Broccoli cannot in general be had so cheaply in the north as in the south, but our later supplies will come in when it would not pay our competitors to send them to us. As to quality, be the place where it may, nothing brought from a distance will equal that taken and cooked at once from the home garden. We tasted some new Potatoes in the end of April, bought on the stands of one of our market towns, and though they looked well, they were not to be compared for an instant with those raised under protection, and not to be mentioned in the same day with a good old Potato. Still they were new, and as such would be esteemed by many whatever their quality. We have alluded more prominently to this matter, as we have not seldom been informed lately that the Covent Garden supplies are scanned very attentively by employers, and whilst nothing is said of extra earliness, something like chagrin is manifested when certain productions come in later than they are to be found there. We would wish it to be clearly understood, though taking that market as a guide, that no private garden, without a great outlay to insure protection and acceleration, can be expected to equal the regular and early and late supplies of the metropolitan market.

Earth Pits and Protecting Material.—We have frequently alluded to these, but as a “GRATEFUL READER,” who has plenty of room, litter, and mats, wishes to have one, and so as to be permanent, to save dwarf Cauliflowers, Lettuces, Endive, &c., and to forward Potatoes, put out bedding plants, &c., in spring, we would advise him to carry out his proposals; but in his stiff ground, above all to avoid making any sort of a trench, as for a Celery-bed, as dampness will then be a greater enemy to him than the frost would be. The first point, then, is to have the bottom of your pit as high as the natural ground, if a few inches higher all the better. The second is to have the width of the open space less by from 4 to 6 inches than the width of the proposed covering. The third is to prevent water accumulating in the pit, if you do not use waterproofed covering, such as putting a small drain a foot below the surface in front, with small pipe outlets from that beyond the front earth wall, but with the open mouth of these protected by wire to prevent mice, &c., entering. The fourth point is to have the back wall about double the height of the front one, the height to be proportioned to the width, and to the height of the plants to be grown in them. From $4\frac{1}{2}$ to $5\frac{1}{2}$ feet in width is a very serviceable pit, and even for rather dwarf plants of Cauliflower, inclined a little to one side, 15 inches at back and 8 inches in front will do, and be quite deep enough for the other purposes mentioned. Now, for such a pit mark out a space 6 inches narrower than you intend the top to be, as you cannot build the walls quite perpendicularly, lay out a space 2 feet in width at back and 18 inches in front, and make that the foundation for your wall. Take earth from the neighbourhood, so as to raise the wall, in layers, well trodden and beaten, until it is a foot wide at the desired height at the back and 9 inches in front, in both cases sloping to the natural level outside. This secures the walls of the pit. Run a turf along the top and the sloping sides, which will not only do much to keep out frost, but to send off rain, as very little moisture will pass through such sloping turf. If turf cannot be obtained the walls and a space beyond them may easily be made waterproof by beating the outside smooth, spreading over it a very thin layer of tar, and on that a thin layer of fine gravel, coal ashes, sawdust, or anything most handy, and for the first winter, at least, covering over with a little litter to keep the frost out. In both of these modes we have had useful dry pits that have lasted many years, and been as useful as more costly conveniences. Some time ago, after drenching rains, we had occasion to break one of these earth walls, merely covered outside by turf, and found the earth beyond the exposed surface as dry as if baked in an oven.

Now for protection. Such pits, beyond breaking the force of the wind, are little better than laying in plants in the open air thickly and protecting them with litter, as everything is liable to become wet with snow and rain. Their chief value depends on having protection, more or less, that will keep out wet. The best material and the cheapest in the end for

the purpose will be thin moveable wooden shutters, and when well-seasoned tarred on the outside. The next best is asphalt felt, fastened tightly to strong light wooden frames. Straw covers are the next best, made with wheaten straw, drawn, and the heads cut off before threshing. When threshed by machine the straw is too much bruised, and thus retains moisture. Mats, which our correspondent refers to, become too heavy when wet, and when not stretched tightly allow the rains to pass. We have found them a valuable covering when stretched firmly on a wooden frame and tacked down to it, and then brushed on the upper side with coal tar, heated to make it spread freely and thinly, and then dry sawdust scattered over it. With us such covers have lasted several years, and are still doing good service.

For all these modes of protecting an earth pit in winter and spring, there must be two men to lift the covers off and on as needed, or a stout piece of wood should go from back to front of the pit, and be fixed beneath the surface, on which one man may slide the covers upwards and downwards. Even with such protection in severe weather, some long stable litter, or other similar substance, will have to go over them, and should not be removed until the frost has gone for a day or two. We have had such protection untouched for six weeks, unless to break the surface to arrest the direct lines of radiation, and when exposed the plants looked as fresh as if they had been shut up for only a common winter night. These covers or frames may rest on the back end, and be lifted up less or more on notched sticks when the weather will not permit of their being taken off, and yet is mild enough for plenty of air being given.

All these are best managed when fixed to frames from 3 to 4 feet wide, and the expense of the frame, even in the case of the mat, will soon be saved, as mats last but a little time when rolled up and rolled down frequently, but are a valuable means of protection when kept whole and the surface more or less waterproofed. These earth pits are also easily protected by any textile material that can be fixed on light poles and rolled on and rolled off with ease. For winter use, a waterproof pliable material would be the best for this purpose. For spring use frigi-domo rather tightly strained answers well; but for all such purposes unbleached calico when it shall fall to its old price, which it is every day coming nearer, will be the best and the cheapest, whether waterproofed with oil, beeswax, and driers, or as sent out from the loom, for when tightly strained it sends off water like an umbrella; and when any of these means are used, cross sticks, as alluded to above, will be necessary to keep the covering above the plants, and to act as the whalebone in the umbrella. When using such material it is well to have a slight rail of wood at the back and front of the pit, to keep the calico, &c., from resting on the ground. Besides the pole at each end for every 30 or 40 feet in length to roll upon, and to stretch tightly longitudinally, strings will be wanted every 4 feet or so, back and front, to tie to pins to keep the calico, &c., stretched. Our experience would lead to the conclusion that when we can purchase nearly two-yards-wide, not-over-strong, unbleached calico for from 6d. to 8d. or a little more per yard run, there is no other protecting material for such cold purposes that will answer so well or can be managed so economically. We have had bedding plants under such calico from the middle of March to the beginning of May, with scarcely the necessity of moving it all that time, and the plants flourishing without the need of water, &c.; and with such a covering our correspondent might keep his pit tight-covered, unless when he wanted to gather the contents, as sufficient light would be admitted to keep up growth, and sufficient air would circulate freely by merely elevating the calico a little back and front between the strings that keep all tight. In severe weather a little clean straw and clean litter would require to be thrown over it. We find that for such purposes a very stout strong cotton is not so economical as a thinner cheaper one.

ORNAMENTAL DEPARTMENT.

In this and other departments our work has been a continuation of that of previous weeks. We have not yet cleared the flower garden. In the open ground *Salvias* are still good, and, where at all sheltered, *Scarlet Pelargoniums* and *Caleceolarias* have some fair bloom; and some annuals, as *Larkspur*, *Candytufts*, and *Erysimum*, are in good bloom. *Dahlias*, even in sheltered places, are about over, though a few good flowers could be gathered. Altogether we must soon clear off, as the first leaves drop from the deciduous trees. We have taken up what few plants we want to keep. Some *Scarlet Pelargoniums* which we wished to keep for centres to pyramids, we have potted singly, and left their full length; others which we wished to have as

strong low plants we have pruned back to the hard wood, spurring them in, and then cutting the roots to from 4 to 6 inches in length. We packed the roots of some twenty or more plants in a 12-inch pot, and set them where they will be rather dry and have no frost, and it will be well if they make no leaves larger than a sixpence before the middle of March. —R. F.

COVENT GARDEN MARKET.—NOVEMBER 27.

ARRIVALS have been somewhat heavier this week, particularly in Portugal Grapes, Oranges, and Chestnuts. Business, however, is very depressed, buyers holding over until a nearer approach to Christmas. Pears comprise *Winter Nelis*, *Chauvontel*, and *Glen Morceau*; Apples *Libanon Pippin*, *Cox's Orange Pippin*, *Nonpareils*, *Reinettes*, *Calville Blanche*, and others. Good sound Potatoes are in brisk demand, and worth rather more money in the northern markets.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	2	0	3	0	Melons..... each	2	0	3	0
Apricots doz	0	0	0	0	Nectarines doz.	0	0	0	0
Cherries lb.	0	0	0	0	Oranges..... 100	5	0	10	0
Chestnuts..... bush.	8	0	14	0	Peaches..... doz.	0	0	0	0
Currants..... ½ sieve	0	0	0	0	Pears (dessert) .. doz.	2	0	3	0
Black doz.	0	0	0	0	Pine Apples lb.	4	0	6	0
Figs doz.	0	0	0	0	Plums ½ sieve	0	0	0	0
Filberts lb.	1	0	0	0	Quinces doz.	2	0	3	0
Cobs lb.	1	0	0	0	Raspberries lb.	0	0	0	0
Gooseberries .. quart	0	0	0	0	Strawberries lb.	0	0	0	0
Grapes, Hothouse.. lb.	2	6	5	0	Walnuts..... bush.	10	0	16	0
Lemons..... 100	8	0	12	0	do. per 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes doz.	2	0	4	0	Leeks bunch	0	3	0	0
Asparagus bundle	0	0	0	0	Lettice per score	1	0	1	6
Beans, Kidney 100	0	0	3	0	Mushrooms pottle	2	0	3	0
Scarlet Run. ½ sieve	0	0	0	0	Mustd. & Cress, punnet	0	2	0	0
Beet, Red doz.	2	0	8	0	Onions..... per bushel	3	0	5	0
Broccoli bundle	0	6	1	6	Parsley..... per sieve	3	0	0	0
Brus. Sprouts ½ sieve	2	0	2	6	Parsnips doz.	0	9	1	6
Cabbage doz.	1	0	1	6	Peas..... per quart	0	0	0	0
Capsicums..... 100	2	0	3	0	Potatoes bushel	3	0	4	6
Carrots bunch	0	6	0	8	Kidney do.	3	6	5	0
Cauliflower doz.	3	0	6	0	Radishes doz. bunches	0	9	1	0
Celery bundle	1	0	1	6	Rhubarb bundle	0	0	0	0
Cucumbers..... each	0	6	1	0	Savoy doz.	0	9	1	0
Pickling doz.	2	0	0	0	Sea-kale basket	0	0	3	6
Endive doz.	1	0	0	0	Shallots lb.	0	8	0	6
Fennel bunch	0	3	0	0	Spinach bushel	2	0	3	0
Garlic lb.	0	8	0	0	Tomatoes..... per doz.	2	0	3	0
Herbs bunch	0	8	0	0	Turnips bunch	0	4	0	0
Horseradish .. bundle	2	6	4	0	Vegetable Marrows, dz.	0	0	0	0

TRADE CATALOGUE RECEIVED.

J. House, Eastgate Nursery, Peterborough.—*Catalogue of Roses, Fruit Trees, Conifera, Hardy Trees, Shrubs, &c.*

TO CORRESPONDENTS.

“* We request that no one will write privately to the departmental writers of the “*Journal of Horticulture, Cottage Gardener, and Country Gentleman*.” By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

STAR PINKS.—“L. R.” and other correspondents wish to know where these can be purchased. It would be worth any florist’s while to advertise them, for they have been so long neglected that they are now a novelty.

YELLOW-LEAVED NASTURTIUM (*L. W.*).—If permanent, and only 6 inches high, it would be a good edging plant. Send a specimen to the Floral Committee of the Royal Horticultural Society. It is a novelty.

AM I AN AMATEUR NOT EXCLUDED BY THIS RULE?—“C. C. E.” asks this, and the rule is:—“Amateurs (by which is meant persons not being gardeners, nor employing any person as a regular gardener), may compete.” “C. C. E.” has a servant who works in the garden, but also cleans boots, feeds pigs, attends to horses, and does other jobs about the house. We consider the servant is not “a regular gardener,” and that “C. C. E.” is entitled to exhibit as an amateur.

CAMELLIA (*E. Robinson*).—Even if we saw a flower we could not be certain of the name, considering the hundreds of varieties existing, much less is it possible to name it from a twig.

DESCRIPTIVE CATALOGUE OF FRUIT TREES (B. W.).—The best descriptive catalogue of fruits is "Hogg's Fruit Manual." You can have it free by post from our office if you enclose 5s. 4d. in postage stamps with your address.

NUT TREE PLANTING (A. K. H. W.).—In Kent, where there are very extensive plantations, it is usual to plant the trees 12 feet apart each way, and to plant a Currant or Gooseberry bush, or sometimes a Hop plant between them, so that the plants for a time stand at 6 feet apart. They are generally planted at right angles. The Currant or Gooseberry bushes are removed as the Nut trees become larger. It is the invariable practice to prune these very severely, and so that the full-grown plant resembles in some degree an inverted umbrella, only the boughs bending outwards being retained, and of them only the very small ones. All the strong shoots, 6 feet high or so, are removed, the pruning, or rather shortening, of these being performed with a rough saw rather than the knife, so as to check aftergrowth rather than encourage it. With the new-planted bush little can be done beyond removing the centre shoots and encouraging the side ones. In your case trees 10 feet apart might do, and even then for a year or two a Currant or Gooseberry bush might be planted between. A raised mound is only necessary when the ground is moist; but on dry stony ground, where this fruit is most profitably grown, trees are always planted on the level. Generally the Filbert and Cob plantations occupy some dry hillside, where the subsoil, however full of stones it may be, is penetrable by the roots of permanent trees like the Nut, and on such soils, in favourable seasons, more than a ton weight of nuts has been gathered per acre. We would not recommend your using any dung at planting, as the trees ought to grow fast enough in the soil you describe. Of the varieties grown, the red-skinned Filbert is the best flavoured, but the large size of the Cob Nuts makes them the greatest favourites. They, too, are most extensively grown; the others are either less productive, or have only some peculiarity to recommend them not cared for by the general grower and consumer. The Cusford seems to do well in some places, and is a very thin-shelled Nut, while the Frizzled Filbert looks curious at table in a green state, but when ripe is less remarkable. They may all be planted as early in the autumn as convenient; but, like most deciduous trees, may be planted at any time during the winter when the state of the weather and ground is favourable, but no doubt the autumn is better.

STORING SEED POTATOES (Idem).—They may be kept very well in the clamp along with the others, providing they are not wanted very early. In the latter case it is, perhaps, better to keep them in an outhouse. The only things to guard against is frost on the one hand, and undue warmth on the other; The first will destroy them, the last impairs their vitality by encouraging useless and wasteful growth. The fresher and plumper they are when planted the better will be the crop, other things being favourable. Shoots an inch long are not objectionable, but those longer than that do not so well, and the second or third growth, assuming the first shoots to have been removed, is not so vigorous as the first, and the crop is lessened accordingly.

TRANSPLANTED TRIPOLI ONIONS (Idem).—Your Onions must have been sown too early, otherwise transplanting them should not have made them produce offsets. At the best, it is seldom that the Tripoli forms a good well-shaped Onion when sown in autumn, nor yet in spring; but we are not so particular in points of excellence with anything that comes in when wanted. We have ceased growing the Tripoli for some years, contenting ourselves with a home-raised variety, more resembling the Brown Spanish than anything else. This we sow alike in spring and autumn, but never obtain such fine bulbs from the latter sowing as from the former, although some are allowed to remain where sown and others are transplanted. The bulbs are usually more or less deformed, but some are well-shaped, and much superior in size to those we had from the Tripoli in former years. We also sow some of the Silver-skinned in autumn to draw in a green state. At the same time we believe the Tripoli, with all its faults, to be the hardiest, and if you delay the sowing till a little later, perhaps the evil you complain of may be abated.

CYLINDRICAL VINERY (T. S.).—It is not intended to be heated. Keane's "Out-door Gardening" will give some of the information you require. You can have it free by post from our office if you enclose twenty postage stamps with your address. There is no book that does or could state that if sown at such a time it will bloom by another time mentioned. The soil, season, seed, and skill vary too much.

VINES (J. R. Boyd).—We would recommend you to remove the old Barbaresco entirely, and plant the Alicante in its place. You have already three Muscats, so you do not require the Canon Hall. If you do not like Black Prince put the Royal Ascent in its place. It is a fine early Grape, and will hang as long as you want it.

THINNING THE LEAVES OF VINES (A Novice).—Grapes cannot be grown long to great perfection if the leaves are greatly reduced in number. If plants have to be grown under Vines during summer, light should be admitted to them, not by denuding the Vines of foliage, but by having a less number of Vines in the house.

HIGH CULTIVATION OF ROSES (Idem).—High cultivation means a liberal supply of manure and moisture, dug pointed into the soil, liquid manure, and mulching being all applied.

VINE BORDER MAKING (A Young Gardener).—We do not approve of putting the compost in a heap twelve months previous to making the border. We prefer the sods fresh or but a few days cut, so as to allow of their becoming dry. You will not only require a drain to carry off the superfluous water from the border, but the bottom of the border being cold and wet, the roots should be prevented penetrating into the soil there by concreting or a layer of bricks, tiles, or flags, grouting them with cement; 9 inches to a foot of brickbats or stone rubble ought to be placed at the bottom of the border, and then a sprinkling of bruised bones. You may then put on a layer of turf 2 inches thick from a pasture where the soil is a good rather light loam, and the first layer should be 6 inches thick. You may then give a sprinkling of bones, lump charcoal, and a sprinkling of lime rubbish, but no thicker than to barely cover the ground; and upon these a four-inch layer of sods should be put, then a thin layer of horse-droppings, and then 3 inches of lime rubbish, which will make the first foot in depth. Proceed with the next layer as with the first; and having made three layers, the surface should be covered with 6 cwt. of rotted turf laid up as you propose doing now, mixing with it 5 cwt. of half-inch bones, and between every layer of sods there should be a layer of fresh horse-droppings an inch thick, and a sprinkling of the

half-inch bones and old mortar equal to the thickness of the layer of sods. The drain should have a proper outlet.—G. A.

MARÉCHAL NIEL and CÉLINE FORESTIER ROSES IN NORTH OF IRELAND (John Boyd).—"Protect Maréchal Niel and Céline Forestier Roses; in fact, it is safest to give protection to all Tea or Tea-scented Noisettes. All Roses here (Dorset), are mulched and earthed up over the mulch. The Tea and Tea-scented Noisette Roses are all so treated, and protected with Asparagus haulm placed against the trees. I expect a hyperborean winter. The robins bring their complaints early in August; they did so last year.—W. F. RADCLIFFE."

PRUNING ROSES (Mrs. A. H.).—"When Roses, now too strong, produce blind wood, it is best to root-prune or remove them, and not cut the wood short the next year. As a rule, dwarf growers require hard pruning, and luxuriant growers much less shortening. The hole at the top of the Briar stocks, which you mention, is owing to the immaturity of the wood. Put wax over the top of the Briar, or water will find its way in at the aperture, and that will deteriorate or destroy the Briar.—W. F. RADCLIFFE."

ROSE STOCKS IN POTS (A Beginner).—"Both the Briar and Manetti Rose will flourish in 11-inch pots when sunk in the ground. It is a good plan where the roots of trees interfere. If the earth is not very dry do not water any pot Roses in winter. The earth should only be sufficiently moistened to prevent the roots from being dried too much. The plants sunk in pots should be thoroughly watered, so as to touch all the points of the roots, once or twice a week during very dry hot weather. Sprinklings day by day only chill the surface.—W. F. RADCLIFFE."

CUT ROSES (H. T. R.).—Apply to Mrs. Webber & Co., or Mr. Buck, Covent Garden Market, London.

ROSE SEED SOWING (Celia).—The seed should be sown as soon as the hips are ripe, they being pulled in pieces and the seeds taken out. They should be sown in deep pans or pots, draining these well, and filling to within three-quarters of an inch of the rim with a compost of two-thirds light turfy loam, and one-third sandy peat or leaf mould, adding one-sixth of silver sand. The surface being made fine, sow the seeds rather thinly, and fill the pot to the rim with fine sandy soil, or cover them from half to three-quarters of an inch deep with fine soil. You may then plunge the pots or pans out of doors in an open situation, warm, and sheltered from winds; but it will be necessary to protect them with wire-gauze or closely meshed wire netting to keep off mice, which are particularly fond of the seed. The pans or pots may be placed in the coolest and most airy part of the greenhouse, and in a position near the glass. The soil should be kept moist.

TENDER PLANTS IN A GREENHOUSE (Subscriber).—1. The degree of heat marked "Temperate," is generally considered 55° on a common Fahrenheit's thermometer, and from 45° to 50°, or 55°, will be quite hot enough at night for the usual greenhouse plants, and in severe weather in winter they will be better at from 40° to 45° than much above 50°. 2. We fear that you will have some trouble with your plants that have cost you so much, and some of which you say are very tender, if you keep them all in one house. We should know better how to advise you if we knew what the plants were. Much may be done by keeping the most tender plants at the hottest end of the house, which will generally be at the end where the flue from the furnace enters the house; but if your plants are so different as to represent Paeleognonims, Heaths, Epacris, Camellias, &c.—plants either from temperate regions, but much warmer than our own, or, if nearer the equator, at such heights as to make them quite at home in our greenhouses—and others which can be made to flourish only in the vicinity of the tropics; then if you wished to grow both kinds of plants in the one house we would make it by means of a glass division into two distinct parts, and keep all the tender plants in the division where the flue enters. With less air given to that part, and more air to the other part, and when the flue was at all hot a little air left at the top of the house in the cooler part, you could maintain a night temperature of from 50° to 60° in one division, and from 40° to 50° in the other division. 3. Remember that even for tender plants it is safer to let the thermometer fall a few degrees below the standard, but so as to be safe, in severe weather, rather than parch the plants with a flue too hot; and during the winter, for all tender plants in severe weather, it will be safer to give only a little air at the top of the house than to put on large fires to enable you to give more, and thus dry the air of the house with your fire, and let in air, frost-dried also, in large quantities to amend the evil. Bear also in mind that when continuous severe cold is to be excluded this will be done best by a regular and not too great a heat in the flue, instead of a strong heat for a short time. When only short-continued frosts are to be guarded against, one brisk fire may prove quite sufficient. The mistake that beginners are apt to commit, who are only taught that—say a temperature of 50°, is quite high enough for their houses, and that when the sun raises it 5° more they must give air, and more air again to prevent its rising to more than 60°, is to conclude that that temperature is to be maintained in all weathers. Now, in severe continued frost it would be in every respect better that for short periods the heat should fall from 5° to 10° at night, allowing it to rise gradually during the day, and if the day was dull and cold to give a little air at the top for a short time, merely to change the atmosphere, and if sunny to slacken the fire, giving only a little air, even if the glass should rise after the little air was on gradually to 15° or 20° above the average 50°. Such heat from the sun will gradually fall though all air should be taken away shortly after midday, and before it is gone the fire heat should just begin to tell. You will manage your house much more satisfactorily if you will bear in mind that it is never desirable that the extreme of fire heat and the extreme of sun heat should ever act on the enclosed atmosphere of a house at the same time. 4. We would tell more of the making up of your fires to last at night if we knew your fuel. We shall suppose coke or coal. In either case it is well to have the house warm enough the last thing at night before making up the fires; and this is in your favour, that fires retain heat for some time. Then, your object is just to add sufficient fuel, well smothered with cinders and ashes, and by shutting both furnace doors and ashpit doors, and leaving only as much air in the latter as will supply a slow combustion, to keep up nearly the heat in the flue instead of making it warmer. When fire is thus to be kept mild for a long time the live coal should be beaten down on the furnace bars instead of clearing them out with a poker. This clearing out the last time of making up will ensure draught, quick combustion, and a high temperature in the house in the middle of the night, just when it ought to be lowest. The lessening of draught by excluding air will secure slow combustion, which will keep the flue warm, but it will

be colder before morning, when, according to the state of the weather, you can let it alone or set it going briskly, as necessary. A few trials will be necessary until you become acquainted with your furnace. People talk leniently of certain stoves burning all night, and for so many hours without attendance. Why, we could do that with any of the scores of furnaces we have managed; but then, of course, if we kept the fire in and the combustion was very slow, we did not obtain much heat, because we just wanted it to be mild and continuous. For mere cool greenhouses in temporary frosts, a quick fire and done with it is often the best.

GRAPES (C. J. Kenworthy).—Dr. Hogg will attend to your request. He did not get the letter and the list you refer to. Your communication has been received with thanks.

LEUCOMES FROM MADAGASCAR.—“Having seen the above advertised in the spring I obtained some seeds, and out of the packet sent to me there were three varieties. The smallest seed was a runner, and the other two dwarfs. I find no improvement whatever upon our ordinary varieties of Dwarf Kidney Beans.—THOMAS REYNOLDS, *Gardener, Ogston Hall.*”

THOMSON'S STYPTIC (W. P., Derby).—Apply to Messrs. Young & Son, Dalkeith, N.B.; but most nurserymen and seedsmen would supply it.

PRESERVING MOSS (R. Palmer).—Cover it over half an inch deep with dry sand, and dry thoroughly by exposure in an oven heated sufficiently just not to burn it.

GLASS (W. S. W.).—We knew of no inherent objection to foreign glass in greenhouses, &c. We should prefer in an orchard-house 21-oz. foreign to 15-oz. British, if the former would admit as much light even as the British ribbed glass. The thicker glass is so much less liable to breakage.

FOWLER'S INSECTICIDE (J. M. K.).—See our advertising columns of this week. Your other questions will be replied to in our next.

EMIGRATING (A Constant Reader).—We never name any country to which we would advise a young gardener to emigrate. Acquirements, constitution, and many other circumstances have to be known before such advice ought to be given.

PACKING TREE FERNS FOR IMPORTATION (An Old Subscriber).—We have received consignments of these from the antipodes, the root portion being covered with moss, and the stems in like manner slightly covered with the same substance. They were occasionally sprinkled with water to maintain the vitality of the “trees” during the transit, and except in two instances, in which the rats had completely taken out the hearts, the plants upon getting soon recovered. It is not necessary to pack them in cases, as they are as safely shipped in packages the same as fruit trees are packed at home.

RHUBARB AND SEA-KALE FORCING (L. P.).—Your mode of forcing these is very good, but you say the stalks grew very long and stringy. We can only account for this from their being kept much too dry, and the heat being excessive. A temperature of from 60° to 65° is sufficient. You should gather before the stalks become too long. Light must be excluded from the sea-kale, so as to have it blanched, but this is quite immaterial as regards the rhubarb; it is, however, mostly preferred blanched, as it is made to appear more delicate. Keep the soil moist, and diminish the heat.

HONEY-SUCKLE INFESTED WITH INSECTS (South Hampshire).—Your Honey-suckle is, we think, annually attacked with aphids. If you were to syringe it forcibly twice or thrice, say at intervals of a week, with soap-suds, and twice a week with water, the insect would be subdued; but if not, syringe with tobacco water, a gallon as obtained from the manufacturer being diluted with six gallons of rain water. It should be applied in the evening, and in the morning a good syringing with water should be given.

SHELTERING BROCCOLI (J. P.).—You are quite right in placing Broccoli with the heads to the north, as they are protected from the sun by the leaves. When the heads are facing the south the sun falls directly on them; and if in the preceding night they have been frozen stiff, they are very often little short of parboiled. You will do well to adhere to a practice you have found successful.

TRANSPLANTING NEWLY BUDDED ROSES (Idem).—There is no risk in moving Roses budded this season beyond that common to them at any future period. There is risk in all transplanting; but there is no more in your case than were the trees older—indeed, they will move more safely.

PEAS FOR SUCCESSION (Idem).—We would have the following sorts:—Daniel O'Rourke for first early, Essex Rival for second early, Veitch's Perfection for main crops, and Hairs' Dwarf Mammoth for late crops. As you wish for none but the dwarfier sorts we have named such only. All require stakes.

ERYTHRINA CRISTA-GALLI CULTURE (An Old Subscriber).—The plants should be cut down in spring to within a few inches of the ground, and when the new shoots are a few inches long the plants should be turned out of the pots and most of the old soil shaken away. They may then be shifted into pots sufficiently large to hold the roots comfortably—that is, into pots a size less than those they were in; and in potting use a compost of rich turfy loam two-thirds, and one-third turfy sand peat or leaf mould, with a free admixture of silver sand. When the plants have filled the pots with roots (as they will speedily do if placed in a gentle heat and moist atmosphere after potting), they should be shifted at once into the pots they are to occupy, which will vary with the size of the plants. Good drainage should be provided, and the compost should be used rather rough. Syringe twice or thrice daily, and sprinkle every available surface to keep down red spider. Too light and airy a situation cannot be afforded, and to keep them dwarf let them have a position near the glass. Thin out the shoots, leaving none but the strongest.

MULBERRY TREE PROPAGATION (R.).—The Mulberry tree is propagated by cuttings of the bearing wood and last year's wood. They require to be cut below an eye, and slanting above a bud, 4 inches being left for insertion in the ground, and if they are 4 inches more than that in length they are sufficiently long. Insert them half way in the soil, making it light and sandy if not so naturally, and choose an open yet sheltered situation. The cuttings should be put in early in spring. The Mulberry is also propagated by layers, a strong shoot being layered in spring, and a slit or notch being made an inch or two below a shoot or joint, which part will, of course, be buried in the soil and be secured with a strong wooden peg. The layer will be well rooted by autumn, when it may be

detached from the parent. There is an advantage in layers—viz., trees may be had in twelve months of a size that it will take a cutting two or three years to attain; but there is this disadvantage attending them, that when a low branch or sucker is layered the plants do not bear any sooner than a seedling, and are no better, unless it be that they are of less vigorous habit.

FRUIT TREE CULTURE (Idem).—“Fruit Gardening for the Many,” free by post from our office for five postage stamps, will suit you.

TWELVE SELECT RHODODENDRONS (T. C., Stockport).—Barclayannum, Maculatum superbum, Vandyke, John Waterer, Sandelfordianum, Nero, Album triumphans, Duc de Brabant, Blandyanum, Genseric, Elfrida, and Everestianum.

CLIMBERS FOR CONSERVATORY (H. G.).—Passiflora Imperatrice Eugénie, Mandevilla suaveolens, Sollya heterophylla, Kennedyarubicunda superba, Cobaea scandens variegata, and Clematis Jackmanni. For the wall outdoors between the drawing-room windows, the Exmouth variety of Magnolia grandiflora will suit you.

MUSHROOM-BED MAKING (An Inquirer).—The stable litter mixed with sawdust will answer very well. The sawdust will not injure the crop.

VINES IN GROUND VINEERIES (Vine).—The Vines and the Grapes they bear may either lie on slates placed as a flooring within the vineery, or may be trained to rods about 9 inches from the glass.

GRAFTING CAMELLIAS (E. Jenkinson).—You may graft year old inferior sort with the Double White, and any stocks you may have may also be grafted. March is a good time for grafting, the stocks being placed in a mild bottom heat of 70°, and a top heat of 55° by night and from 65° to 70° by day, with a rise from sun heat. The house should be kept close and moist, and, if practicable, it is well to cover them with hand-glasses, by which the taking of the grafts will be more certain. Grafting may be done after the plants have bloomed; but it is best performed just before they begin to push afresh. Whip-grafting is the most eligible mode, as it insures the neatest junction. When the grafts have taken the plants should have air, and the pots be gradually withdrawn from the bathed.

PROPAGATING AZALEAS (Idem).—Azaleas may be grafted in the same manner as Camellias. They are also propagated by cuttings taken from the current year's shoots, and these, when their bases have become a little hardened, will strike root freely if inserted in pots well drained and filled to within an inch of the rim with a compost of very sandy peat, and then to the rim with silver sand. The shoots ought to be cut over below a joint, and the leaves removed half way up the cutting. Put in the cuttings round the sides of the pot, inserting them in the soil up to the lowest leaf. The pot should be plunged in a bottom heat of 70° to 75°, and be covered with a bell-glass, affording shade from bright sun, a moist atmosphere, and a temperature of from 65° to 70°. The best stocks for grafting are seedlings, but any of the strong-growing kinds will do.

MICA CAVENDISHII FRUIT DAMPING (W. H. H.).—Your house is probably too moist and cold. Afford a brisk heat of from 65° to 70° by day, from fire heat, and of from 55° to 60° at night, giving a moderate amount of air, and it will suffice at this season if the atmosphere be kept moist by sprinkling the floor, &c., in the morning.

PLANTS INFESTED WITH THRIPS (M.H.).—Your plants' leaves are severely attacked by thrips, which may be destroyed by fumigation with tobacco. The house should be filled with smoke on a calm evening, and if care be taken to have the foliage of the plants dry, the plants you name will not be injured by the fumigation. You must not expect one fumigation to destroy the thrips, so badly infested as your plants seem to be. The house should be filled with smoke every other night for a week, and twice a week for a fortnight, when you may probably overcome the pest. The Myrtle cannot do otherwise than lose its leaves on the parts so badly infested with thrips as that sent. The Camellia, Orange, and Myrtle may be syringed with a solution of soft soap, at the rate of 2 ozs. to the gallon of water, and every leaf ought to be washed on both sides, but especially the under side, using a sponge. The soap solution must be kept off the Ferns and Begonias, also Gesneras, but it will not injure Francisceas, Hoyas, or Stephanotis. Be sure the foliage of the Ferns and plants is dry before fumigation with tobacco.

ORNAMENTAL GRASSES (C. W.).—We can strongly recommend the following, which we have grown, and find highly ornamental. Amongst them are some of the Bamboos, more stately in growth and equally ornamental with the Grasses. All are perennial and hardy. Carex japonica variegata, C. riparia variegata, Festuca glauca, F. variabilis, Dactylis glomerata variegata elegantissima, D. glomerata variegata, D. elatior variegata, Calamagrostis arundinacea variegata, Holcus lanatus variegatus, Elymus arenarius glaucus, Glycerium argenteum, G. roseum albo-marginatum, Arundinaria falcata, Agrostis colorata variegata, A. vulgaris variegata, A. caespitosa variegata, Acorus gramineus variegatus, Phalaris arundinacea variegata, Arundo conspiciua, A. donax, A. donax variegata, A. mauritica variegata, A. phragmites aurea, Stipa gigantea and Stipa pennata, Bambusa Fortunei variegata, B. Metake, and B. gracilis. You may procure plants by sowing seed of the following in spring:—Briza maxima, Lagurus ovatus, Brizopyrum siculum, Agrostis nobiliosa, A. plumosa, Eragrostis elegans, Melinia cernua variegata, Cynosurus echinatus, Pennisetum longistylum, Paspalum jubatum, Anthoxanthum gracile, and Panicum colonum.

ARUNTES, DAPHNE, AND CLEMATIS PROPAGATION (F. G.).—The Scarlet Arbutus is propagated by layering it in spring in pots, which should be kept watered throughout the summer, and by autumn the layers will be well rooted. Daphnes may also be increased by cuttings, employing for the purpose the points of the growing shoots when ripe, or not more than a year old. Insert them in sand in a cold frame, or in a shady border, and cover with a hand-glass. They will be rooted in six weeks if kept moist and shaded from sun. Cuttings of last year's wood should be inserted in spring, or before the plants begin to grow, and cuttings of the young growths, when their bases become firm towards the end of summer. Clematis is increased by layering in spring, before the plants begin to grow, either in pots or in the open ground.

NAMES OF FRUIT (H. B.).—2, Glou Morcean; 3, Kirke's Lord Nelson; 4, Round Winter Nonsuch.

NAMES OF PLANTS (S. D. Goff).—We cannot undertake to name florists' flowers. (A Subscriber).—Thunja occidentalis, perfectly hardy. (S. B. Fox).—Lichen ciliaris, commonly met with.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending November 26th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 20	30.347	30.298	41	36	45	46	N.	.00	Clear, hoar frost ; overcast, cold ; overcast at night.
Thurs. 21	30.469	30.377	44	28	45	46	N.	.00	Overcast and cold ; overcast ; clear and frosty.
Fri. . . 22	30.476	30.421	45	37	46	45	N.W.	.00	Overcast ; partially overcast ; overcast at night.
Sat. . . 23	30.461	30.381	48	24	45	45	N.	.00	Overcast, frosty ; overcast ; clear and cold at night.
Sun. . . 24	30.540	30.516	43	24	45	45	N.W.	.00	Overcast and damp ; overcast, very mild ; clear and fine.
Mon. . . 25	30.470	30.353	41	35	45	45	W.	.00	Overcast ; overcast and cold ; overcast and fine.
Tues. . 26	30.283	30.134	46	28	45	44	W.	.02	Overcast, mild ; overcast, showery ; overcast and very mild.
Mean	30.435	30.354	44.00	30.28	45.14	45.14	..	0.02	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

SALE AT LINTON PARK OF LADY HOLMESDALE'S POULTRY.

WHEN the stud of an eminent patron of the turf is offered for public sale, no little commotion is made in the circle interested in such pursuits. In like manner when the birds of some eminent breeder are brought to the hammer, all those anxious to improve their stock, or perhaps secure a specimen likely to take a prize at an important show, flock to the sale, and contend with each other for the possession of what they think the most promising of the collection.

Such a gathering of the poultry fancy we had the opportunity of witnessing on the 20th inst. at Linton Park, where the whole collection of Lady Holmesdale's birds was brought to the hammer by Mr. Elijah Smith, of Manchester; and, considering the high reputation her ladyship's breed of fowls has attained, and the lion's share of prizes which she has in most cases secured when exhibiting at the principal shows, we were not surprised to see an important gathering of the "fancy." The result proved that these ardent admirers of poultry did not undertake the journey from almost all parts of the kingdom to its south-eastern corner without doing business; for we found that Scotland, the northern, midland, and western counties of England, all sent buyers; and the collection of Dorkings unrivalled, we might say, in England or anywhere else, was, at the close of the day, distributed far and wide.

The catalogue intimated that 114 lots of Dorkings would be offered for sale, 34 of Spanish, and a few of other breeds, making in all 173 lots, mostly in single birds.

The Dorkings were the most scrutinised, and the sale commenced with them, the first lot being a cock, which had won some high honours, and no small amount of speculation was indulged in as to the price he would realise. His worth, however, was soon made apparent by a start of ten guineas, with an offer of five more next bidding, and, after some spirited bidding, he was finally knocked down for twenty-eight guineas; the next one was sold for sixteen guineas; and the nine cocks altogether realised £73. The hens were also keenly competed for, one fetching fifteen and one fourteen guineas, and the proceeds of the forty hens altogether were £150. The prices of the young birds were scarcely inferior to the above, twenty cockerels bringing £85 7s. 6d., and the sum total received for the 112 lots of Dorkings was £407 10s. 6d.; and as all the lots, excepting the last ten, were single birds, the above sum shows the value of 122 birds; but it must be borne in mind that the last ten lots of cockerels and pullets were late birds, and, of course, brought much lower prices than the other. The first hundred birds sold averaged £4 each: we believe this is unprecedented, taking the whole of a collection, which in this instance it did, as not a bird was withheld.

The Spanish and Brahmas also created spirited competition, but the Dorkings were regarded as the cream of the collection, and it was the unanimous opinion of all present that such an assemblage of birds had never before been offered for public sale. Much credit is due to Mr. Martin, Lady Holmesdale's poultry manager, for presenting them in such good condition, and for the other arrangements made for their delivery; while the advantage of an auctioneer being himself a judge and a fancier was also apparent, and we believe all parties were highly satisfied.

We heard one gentleman remark on leaving with two baskets

on the top of his cab, that the contents had cost him upwards of £50, and that £20 more might almost be added for travelling expenses. Such incidents, apart from the entries at our great poultry shows, prove incontestably that the interest in poultry is the reverse of flagging. There was, however, one regret, and one in which we believe all present at Linton Park joined—it was that such a fine collection should be broken up. Yet, in retiring from exhibiting poultry, we have no doubt but the noble lady will still look with interest on forthcoming shows, and if at some future time she should be induced to re-enter an arena in which she has sustained so distinguished and honourable a part, her return will be hailed with pleasure by all who are interested in the improvement of our breeds of poultry. The result of the sale proved that the efforts made by Lady Holmesdale in this direction during the many years she has been an exhibitor have borne their fruit. The proceeds of the sale were about £500.

Amongst the buyers were the Duke of Newcastle through Mr. Douglas, Col. Lane, Drs. Campbell and Kirkman, Messrs. Lingwood, Lane, Burgess, Peters, Parlett, Patten, Musgrave, Cork, Kipping, and Spencer.

The day was dry and fine for November, and as the garden and grounds at Linton Park were liberally thrown open to visitors, many who had a half-hour to spare made a hasty inspection of the pretty winter decoration of the flower garden.

AUCTION OF POULTRY AT THE BIRMINGHAM EXHIBITION.

I NOTICE that the sale of prize and commended poultry by the new system of auction at the coming Birmingham Show, is fixed to take place on Monday, December 2nd, at 11 o'clock a.m. This time appears to me highly inconvenient to persons who, like myself, live a long way from Birmingham, and many of whom may find it impossible to go to that city on Saturday, November 30th, and spend Sunday there. Such persons will not be able to reach Bingley Hall and inspect the birds before eleven o'clock on the 2nd of December.

I think there must be some who will wish with me that the sale took place on the Monday afternoon, or the morning of Tuesday, the 3rd of December.

I am presuming, of course, that the Birmingham Council desires the company of persons likely to be purchasers at the sale.—GLOUCESTERSHIRE.

EXHIBITED FOWLS INJURED.

You can inform "A SUBSCRIBER," that the tail of his White Dorking cockerel was pulled before the public or any of the poultrymen were admitted to the Bristol Show. I was in the Hall (on business) on the day of the judging, and noticed that the bird had no tail then, and, I believe, but am not certain, this was the case before the awards were made. It must have been done in transit to the Show, or by a rival before entering the Hall, for not one man was allowed inside till the Exhibition was opened. I give this as independent testimony, having had no communication with the Committee.—L. WRIGHT.

Those who visited the recent Show at Bristol, must have observed with feelings of indignation the cruel treatment to which some of the valuable fowls had been exposed.

What possible chance can a "pen" have in competing for a prize, if one of its members has had the whole of its tail

pulled out, through, I apprehend, the carelessness and rough treatment of the Society's servants in removing the birds from their travelling baskets to the exhibition cages? What inducement is there for exhibitors residing at long distances to send the pick of their yards if proper care is not bestowed upon them by the officials employed? The annoyance, loss, and mortification felt and expressed by several of the exhibitors at this celebrated Show, will go far either to suppress these shows altogether, or to render them so insignificant as virtually to destroy their utility.

I venture to suggest, as a remedy against future injuries of this kind, that all exhibitors should have their birds shown in their own pens. If a "registered" form of basket, uniform in design, weight, colour and size could be approved by the Committees of the principal shows, there would be then no occasion to handle the birds, either for weighing or other purposes. They could leave their own homes and return to them without any removal from the basket. Thus, at any rate, the beautiful streamers (the pride of many of our varieties), and the tails of all birds would not suffer the injuries they now do.

A prize for the best design might be offered at Birmingham or Manchester.—*Bristol.*

[We fear that if every exhibitor had to provide his own exhibition-pens, it would reduce the number exhibited much more than does the fear of injuries, which injuries, grievous as they are, amount to a very small per-centage of the birds shown. The best security against such injuries would be members of the Committee supervising the penning and the re-basketing of the birds.—*Eds.*]

JUDGING GAME FOWLS.

In my last notes on judging by shape (see page 52), I find I omitted the following points:—"Hocks turning in too much" are a bad and not uncommon defect in shape. The skin of the face of Game fowls should be perfectly smooth, but hard at the same time, and never rough, wrinkled, swollen, or emaciated.

Eyes must match in colour in the same bird, and some have, by hair crossing, one eye yellowish-red and the other reddish-yellow. The eyes of the Brown Reds should be of the very darkest brown, and not jet black, as in Dark Greys. The pupil of the eye should never be visible in Brown Reds, the eye being too dark for it; where the pupil of the eye is visible, they are crossed and mongrel Brown Reds. Dark Greys and Dark Birchens and Blacks should have jet black eyes, with the pupil of the eye never at all visible. In all the other breeds having lighter eyes the pupil of the eye is distinctly visible, of course, and always black in colour, the lighter-coloured eyes being flatter outside, and rather smaller, and less round or globular than the full, bold dark eye. The two eyes are clearly of different origin. The Black Game, I think, derive their red combs and faces from the Black-breasted Reds.

In the spread and fan tails the feathers must never be loose, scattered, or too much detached, so as to throw daylight between the feathers, but should stand strong and stiff, the feathers touching one another, and such tails are stronger in muscular power than the drooping and closed tails, which are more relaxed, and less strongly supported. A drooping closed tail, I know, indicates a drooping spirit in the bird.

The feet of Game fowls should never be thick, short, or clumsy. Claws long, straight, and strong, slender rather than in the least clumsy. Ball of the foot never at all clumsy or too large, too round, or too bulky; the foot set flat on the ground. Long and spreading strong claws give the bird a good spring, and good hold of the ground in fighting. The back claw should be flat to the ground, and not just touching with its nail or point, as it does when placed too high up; this causes duck feet most. The insteps never thick, round, or clumsy, but clean and well rounded. Scales of the legs smooth and close, and never rough or coarse.

The duck foot is often hereditary, and is so termed when the back claw turns sideways, forwards, or underneath the foot. It is often caused by young growing birds being kept on hard flat surfaces.

Of all the absolute requisites for good Game fowls in shape, a short body stands first as the chief qualification, and for exhibition a long, sharp, fine head is about the second qualification.

I think, on the whole, jet black eyes are correct for Brown Reds, and such birds breed Dark Greys and Dark Birchens easier than the others.

Gervase Markham, a very old writer on Game fowls, classed

them thus:—Red—red eyes, bluish legs; Greys—grey eyes, blackish legs; Yellows—yellow eyes, yellow legs. He says the female is to be preferred to the male; but this will only hold good, I think, when crossing Game with any other breed, and not with Game bred with Game.

The pearl grey eye, or silver pearl grey eye, is now very rare; and only found in the Silver Mealy-grey Duckwings with white legs, which are now seldom seen or heard of. Our old true Greys had this eye, however, but are now almost extinct.—*NEWMARKET.*

BIRMINGHAM COLUMBARIAN SOCIETY'S SHOW.

THIS Society, confined exclusively to a few of the most noted local breeders, has been within the last few years effecting an immense amount of good, in respect to producing almost every variety of Pigeons as closely approaching perfection as can well be attained. By the rules all young Pigeons intended for exhibition at the annual Show, at which alone prizes are offered, are at a certain age printed on the wing-feathers, so that it may be made certain they are bred by the exhibitor; but in the classes for old birds, purchased Pigeons of any kind are equally permissible. Under such conditions the emulation among the members is extreme, and their weekly meetings are of a very interesting character. The Show itself is open to the public without any charge for admission, as no respectable person is refused a free entrance, and thus the public can enjoy an inexpensive treat not attainable at most of such meetings. It is almost unnecessary to remark that the greatest popularity attends this, perhaps the only Pigeon show of any extent in the Midland Counties, in which all the birds shown are of a first-class character.

On the 22nd inst. the Birmingham Odd Fellows' Hall was engaged for the Show, and this proves itself to be a step in the right direction as compared with the arrangements of former years, for a better exhibition room could not be desired, and the courtesy of the Committee caused a very large attendance. One of the most prominent features of the Show was the Pouters, many of which, whilst excellent in style and colour, measured very nearly 20 inches. The Short-faced Tumblers were extraordinarily good, besides which the Dragons, Carriers, and Antwerps were especially worthy of highest approval. In the Toy Pigeons, a very large entry of Satinets, chiefly bred by the Hon. Secretary, were of such beauty as to secure every one's good opinion: they are comparatively a new introduction, and with Brunettes and Fairy Pigeons, formed an unusually good variety class. So closely competing were many of the specimens, that in several instances, extra prizes were given. As at all previous annual meetings Mr. Edward Hewitt, Sparkbrook, Birmingham, was the Arbitrator.

YOUNG BIRDS.

CARRIERS.—First and Second, F. F. Foster. Third, H. Allsop.
POUTERS.—First and Second, F. F. Foster.
TUMBLERS (Almond).—First and Second, E. D. Careless.
TUMBLERS (Long-muffed).—First, Second, and Third, E. D. Careless.
JACOBIANS.—First and Second, H. Allsop.
FANTAILS.—Prize, J. Edge.
ENGLISH OWLS.—First, Second, and Third, C. Barnes.
TURBITS.—First and Third, J. Barnes. Second, J. Edge.
BARS.—First, Second, and Third, H. Allsop. Highly Commended, F. F. Foster; J. Ludlow.
DRAGONS.—First, J. Edge (Whites). Second and Third, J. Ludlow. Commended, J. Edge.
ANTWERPS.—First, J. Bradley. Second, J. Edge. Third, J. Ludlow. Highly Commended, J. Bradley; H. Noyé.
ANY OTHER VARIETY.—First, Second, and Third, H. Noyé (Satinette). Highly Commended, E. D. Careless (Black Fairie); F. F. Foster (Isabel).

ADULT BIRDS.

CARRIERS.—Cocks.—First, C. Barnes. Second, G. Smith. Harborno Hens.—First, G. Smith. Second and Third, C. Barnes. Highly Commended, J. Ludlow; C. Barnes.
POUTERS.—Cocks.—First, Second, Third, and Highly Commended; A. H. Stewart, Harborne, near Birmingham. Hens.—First, Second, and Third, A. H. Stewart.
TUMBLERS (Almond).—First, A. H. Stewart. Second and Third, E. D. Careless.
TUMBLERS (Short-faced).—First and Third, E. D. Careless. Second and Highly Commended, A. H. Stewart.
TUMBLERS (Clear-legged).—First, E. D. Careless. Second, G. Smith.
TUMBLERS (Long-muffed).—First, Second, Third, and Highly Commended, E. D. Careless.
JACOBIANS.—Prize, H. Allsop.
FANTAILS.—First, A. H. Stewart. Second, J. Edge.
FOREIGN OWLS.—Prize, E. D. Careless.
ENGLISH OWLS.—First, J. Edge. Second and Third, C. Barnes.
TURBITS.—First and Third, C. Barnes. Second, A. H. Stewart.
NUNS.—Prize, A. H. Stewart.
BARS.—First and Third, H. Allsop. Second, J. Ludlow.
DRAGONS (Blue).—First and Second, J. Ludlow. Third, H. Allsop. Highly Commended, J. Ludlow.
DRAGONS (Any other colour).—First and Second, J. Ludlow.
ANTWERPS.—First and Third, J. Ludlow. Second, J. Bradley. Extra Third, H. Noyé. Highly Commended, J. Ludlow; J. Bradley.
ANY OTHER VARIETY.—First, H. Noyé (Satinette). Extra First, A. H. Stewart (Fairies). Second and Extra Second, F. F. Foster. Third, H. Noyé (Satinettes). Extra Third, F. F. Foster (Isabel). Highly Commended, H. Noyé (Brunettes).

ANTWERPS.—Cocks.—Cup, First and Second, J. Bradley. Third, H. Noye. Extra Third, J. Edge. Highly Commended, J. Ludlow; J. Bradley; Barbes.

TURBITS (Single Birds).—First and Second, C. Barnes.

ENGLISH OWLS (Single Birds).—First, C. Barnes. Second, J. Edge. TOMBLERS (Long-muffed, Single Birds).—First and Second, E. D. Careless. Third and Highly Commended, J. Edge.

ANY OTHER VARIETY (Single Birds).—First, Second, and Extra Third, H. Noye (Satinette, Brunette, and Satinette Tail Owl). Third, C. Barnes (Satinette).

POULTRY AND PIGEONS AT THE BRISTOL SHOW.

THE morning of Wednesday, November 6th, found me at the Bristol station—the finest November morning I ever remember. If the almanack had said September, the eyes and feelings would have endorsed that statement, so bright and mild was the day.

Before going up to the Poultry Show, I turn to the left and thread the narrow old-world streets of Bristol—not over-clean streets, but highly interesting, speaking to us through their steep-gables and overhanging first-floors of long-past years. I am bent on my usual pilgrimage to St. Mary's Redcliffe Church. Fancy being in Bristol and not going to see its principal ornament. This fine old ecclesiastical structure has now been many years in course of restoration, but so large is it, and the stone in such a honeycombed crumbling condition, that for some years the progress made seemed as nothing to the eye, for the old stone had to be replaced by new. Now, however, restoration has grown beyond decay. At least, there are three portions, the old crumbling part looking as ever, especially the tower with its well-known stump of spire, the spire to within a few feet of its base having been blown down; then there is the part restored a few years since, but which Bristol air and smoke have discoloured; and the newly-restored portion looking fresh and clean. What a compound—very old, rather new, and quite new! I enter and the morning service is being chanted in one of the chapels at the east end, and as I stand in the nave the boys' voices, best of voices, charm me with their sweetness, while the bright sunshine is streaming through the painted windows, and casting their colours on arch and pillar. I think of the lines of Keats, in which he describes the lady kneeling beneath such a window.

"All diamonded with panes of quaint device,
Innumerable of stains and splendid dyes,
And in the midst 'mong thousand heraldries
And twilight saints, and dim emblazonings."

And how the moon-light

"Threw warm gules on Madeline's fair breast.
As down she knelt for Heaven's grace and boon,
Rose-bloom fell on her locks, together pressed,
And on her silver cross soft amethyst,
And on her hair a glory like a saint;
She seemed a splendid angel newly drest,
Save wings, for Heaven."

Staying for the last chanted "Gloria," I, as the voices die away down the aisles, walk slowly out of this, the finest church the west of England can show, and am back again in the busy, bustling, common world of Bristol streets. What a contrast! What a contrast!

A quick walk of a mile or more and I was at my quarters of last year, the Rifle Drill Hall, but what different weather! Then snow and frost, now clean paths and sunshine. After entrance-fee is paid (a heavy fee, being half-a-crown), and catalogue bought, I make a hasty tour all round, to get an idea of the whole, a sort of bird's-eye view of the birds, a bird's-eye view from its general impression, but not from the height of the beholder.

There were above six hundred pens of poultry, and nearly two hundred pens of Pigeons. Of the former I shall not speak very particularly, but the Pigeons, being strangers on their first visit, shall be noticed fully. The fowls were, save the Bantams, chickens of this year. Mrs. Arkwright carried off the Dorking cup, and Mr. Tudman that for Cochins (Partridge). The White Cochins were numerous and pretty, and I was delighted to see a pen of Blacks, which was so good as to obtain a first prize. The Game classes were not so brilliant as usual, although Mr. Fletcher secured the cup for the best pen of birds in the Show. It was a near run between his pen and Mr. Parsley's Spanish. I preferred the latter. Mr. Boyle's first and cup Brahma cock is a superb bird; and the first pen of Light Brahmas, Mr. Herbert's, was greatly admired. Of the Hamburgs, the largest entry was the Silver-spangled, surely the prettiest of all Hamburgs. The Polish and French were not, I think, so good as last year. The Bantama were up to the mark. I was very pleased to see a full entry of Sebrights, as to feather the most beautiful of all fowls. People with small premises should take up this fancy. Among other classes of Bantams appeared some quaint-looking Pekins, and odd-looking Japanese, the former, Mr. Cope's, being very good.

I now turn to the Pigeons, which, appearing for the first time, deserve especial notice. Perhaps they were the most numerous and the best birds that have ever been shown. The Carriers were a good and strong class, in number twenty-eight pens; Black birds had the first prize and cup. The Pouters were even a better class; the Judges said "An excellent class," and they were right. Out of the fifteen pens there was not a bad one, for not only were the prize birds excellent,

but the commended ones, witness Mr. Heath's White, were very good. Almond Tumblers, ten pens. Such little round heads, such stops and colour. In the Tumblers, of any variety, Mr. Stewart was first, as in Pouters.

The Rants were as usual now-a-days, all Blue or Silver. The Jacobins were good; among them I was glad to see a pair of Blacks. The Fantails were very excellent, but, if I remember, the White took all the prizes. Mr. Bailey showed some imported Yellows. Trumpeters, nine pens. Next the lovely, most lovely, African Owls. No one could look at the first-prize birds without admiration, and they took the cup from the Tumblers, Rants, Jacobins, Fantails, Nuns, Turbits, Barbs, Dragons, and Any other variety class. They belong to Mr. Joshua Fielding. While delighting in the African Fairies, let me observe, that the old English Owl ought to have a separate class. The Powder-blue Owl is one of the very prettiest of all Pigeons, and the little foreigner ought not to cause the English bird to be dismissed from our Pigeon shows. Let them share a class or share the money devoted to Owls.

Next came the Nuns, which I also much admired. The first prize ones, Mr. C. Bolpin's, were admirable, as also his second prize. Next, Turbits; then Barbs, a very large entry—viz., nineteen, and only one bad pen. They presented a fine array of broad heads, short beaks, and well-wattled eyes. The Barb is a charming Pigeon, and although various colours are attainable, the Blacks are always the best. Dragons, happily not in this catalogue, as often vulgarly printed *Dragons*. Our ancestors had Horsemen, heavy birds; then Dragons, lighter birds. I liked Mr. Crossley's second prize Blues better than the first prize. The Whites of Mr. Pigeon which were highly commended, were very pretty and good. The "Any other distinct variety class" consisted principally of German Toys, but there was a good pair of Frillbacks, an ancient Toy, which from its singularity always pleased. The pair shown at Bristol exactly resembled these described by Girtton; they were white, well-frilled, and Runt-like, though smaller. There were eight pairs of good Terns or Sea-Swallows, improperly, through generally, merely called Swallows. A rare New Zealand Parrot completed this admirably-arranged and beautiful Show, which we, in the west of England, hope will be annual.

I have no single fault to find, I only suggest in regard to the Pigeon pens, that where there are two rows together, the numbers should run in order, not the lower row one way and the upper another, which necessitates a constant turning over of the catalogue. The prizes being printed in the catalogue was a great convenience. The refreshments, as last year, were good and reasonable in price. How different to the Bath and West of England Shows, where I always get bad food, bad waiting, and abominably dear.

The Show at Bristol will, no doubt, increase the love of Pigeons in the west of England. One pleasing fact I must record and then conclude. The Show closed at ten o'clock on Friday night, and at a few minutes past five the next morning, all the distant birds were at the station, and by half-past eight o'clock the whole of the eight hundred and odd pens of poultry and Pigeons were at the station. Well done, active, business-like, and careful Bristolians!—WILTSHIRE RECTOR.

THE SOMERSET COUNTY POULTRY ASSOCIATION.

THIS Society offers a splendid programme. Never did an Exhibition grow more rapidly, may its growth prove sure. During the summer of this year Weston-super-Mare held its first show, a very modest beginning, but its present venture means to bid high for the lead as a Southern show.

The classes at Weston are chiefly composed of a cock and one hen. Thus, Spanish, Coloured Dorkings, Dark and Light Brahmas, have each a class for aged birds, and a class for produce of 1867, with three prizes—£3, £2, and £1. In the case of Light Brahmas, the chicken prizes, whether intentionally or by accident, are £2, 30s., and 20s. White Dorkings (any age); Buff Cochins, Partridge Cochins, and White Cochins (ever one year); Black-breasted and other Red Game, Duckings and other Greys, and Game Any other variety (all over one year), have in each case three prizes of the same value as Spanish and Dorkings. Cochin produce of 1867, cockerel and one pullet (any variety), and Game produce 1867 (any variety), have to compete together; and four prizes are offered to each breed—viz., £3, £2, 30s., and 20s. The five varieties of Hamburgs (any age); White-crested Black Pelands (any age), and Gold or Silver Polands (any age)—a marked improvement this division to Bristol—and French fowls (any age) have each three prizes £2, 30s., and 20s. "Any other distinct variety" is most liberally dealt with. This is a curious class; at Bristol, for instance, very poorly represented, but at Salisbury last year a class that if I write correctly received and deserved several extra prizes; well Weston-super-Mare offers two first prizes, each £3, two second, £2, two third, 20s., two fourth, 10s.; this is most liberal and ought to bring together a splendid motley group, but it is an example that our great grandmother Birmingham might imitate. Then come Game Bantams, the Reds with prizes equal to the Dorkings, the Duckings to the Hamburgs; Gold or Silver-faced, and any other variety having classes and similar prizes. Then a class for cot-tagers only, entrance 2s., for any variety of cross-bred fowls, three

prizes; Ducks three classes, and three prizes to each; Geese and Turkeys each three prizes, and the prizes liberal, £3, £2, and £1; lastly, a selling class, price not to exceed 30s., and entrance fee 2s. 6d.

I have purposely omitted the single cock classes—Spanish, Dorkings (any variety); Cochins (any variety); Brahmas (any variety); Game (any variety); have each classes with three prizes, £2, 20s., and 10s., for birds over one year, and for birds of 1867. Hamburgs (any variety) four prizes; Polish (any variety); French (any variety); Bantams (any variety) each three prizes. There is also a class with £2, 30s., and 20s. prizes, for the best single Game hen (any variety).

Then comes a list of silver cups. One of ten guineas is the gift of the President, T. T. Knyfton, Esq., for the best pen in the Exhibition. Spanish, Dorkings, Brahmas, Cochins, and Game, have each the chance of a silver cup value seven guineas, the Hamburg cup being five guineas. Another five-guinea cup is offered to the best cock or cockerel in the single cock classes, down to Hamburgs. Why should Polish or any other single cock be cut out of this competition? This is a little oversight, I fancy. These cups are in lieu of first prizes, and I may say of them the same as of the Northern Club, it would be better cup or its value.

Then come liberal classes for Pigeons, with 20s. and 10s. prizes, and a silver cup for the best pen, value three guineas.

Then, Weston has adopted the Birmingham sale regulations, a very wise addition. This important regulation will, I am certain, prove satisfactory to both exhibitors and the Association.

The London and South Western, and the Bristol and Exeter Railways, have kindly undertaken to return unsold birds free. The Midland and Great Western Railways refuse this accommodation. I presume, therefore, all who can will avoid the latter two.—Y. B. A. Z.

KENDAL AND NORTH WESTERN COUNTIES POULTRY AND PIGEON SHOW.—We have just seen the prize schedule of this Show. No doubt so liberal a list will insure a first-rate Exhibition. There are no less than fifty-six classes, to which twenty-five pieces of plate, as cups, and a variety of other articles, will be awarded. The money prizes are no less liberal, as three prizes are to be given in most of the classes, and in a few even a fourth prize. The Committee is now so well known for the care and attention it annually devotes to the birds whilst in its possession, that on that score, every exhibitor will repose the most perfect confidence; and the Albion Buildings, than which a more satisfactory exhibition-room cannot be desired, are already engaged for the purposes of the approaching meeting.

CUMBERLAND AND NORTH OF ENGLAND POULTRY SHOW.—This will be held at Whitehaven. The prize list is very liberal. There are three prizes in each class, varying from £3 downwards, and in addition there are nineteen pieces of plate to be awarded to the best pens in various classes. The birds in most cases are to be exhibited in pairs.

WENTWORTH POULTRY SHOW.—It will be seen that the date of holding this poultry Show has been altered. The prizes are liberal; but to have only one class for Cochins and one class for French Fowls is rendering the task of the Judges almost hopelessly difficult, and must cause dissatisfaction. The birds must all have been hatched in the current year.

REVIVING BEES.

As 1866 left me with ten stocks of bees, so 1867 found me with the same number. But, what weather! Ilives covered with snow, and hard times with empty cupboards. However, the first month passed with all its trials, and in the second what lovely weather! Now we can feed the hungry. Now their music is heard, and all seem merry; breeding is commenced, the first load of pollen seen on the 1st of March, and then, oh, dear! a second winter. April comes, one stock has dwindled away to a handful of bees. I broke it up, found a little honey and a few bees just coming from their cells, and a few eggs, two or three in each cell, and no grubs, and feed I had to. May comes, no honey to be found; last week of May no better, but a wholesale slaughter of the drones and drone-brood. This week I found a stock nearly starved to death, the bees being so weak that they could only just move their wings a little. I pulled some of the comb out and breathed on them, and finding that there was life in them, and it being also a nice day, I thought I would not give up, but made some syrup and poured it warm between the combs all over the bees, and now it is one of my best stocks.

I had a stock three or four years ago which I served in the same way, only I took it to the side of the fire until the bees

began to run outside and round the hive; when they had to shift their quarters, they did well, and I have them now. I think many a stock could be saved if seen to in the same way. But I know how it is, the bee-master catches up the hive and thinks they are dead enough because they cannot move; but I say, Breathe on them, and if they only just move their wings there is life, and there is hope if there be only a fair sprinkling of bees. My first swarm, which came in the first week in June, weighed 6 lbs.—A BEES BEE-KEEPER.

DZIERZON ON THE UTILITY OF ARTIFICIAL SWARMS DURING THE YEAR 1866.

The question whether it is more profitable to wait for the natural increase of bees by swarming, or to effect it by artificial means, has already been much discussed. One party of bee-keepers speaks unconditionally on behalf of the natural; another of the artificial increase. The truth is often found between the two. Artificial swarms are frequently of great service; but this is dependent on the season, and other circumstances.

Artificial swarming as a mode of multiplying stocks of bees, can evidently only be of use when an increase is desirable. In bad or very moderate years in which undivided stocks amass their winter store with difficulty, large artificial swarms are often pernicious, whilst in good seasons, which are at the same time good years for swarming, when natural swarms appear early, and in sufficient numbers, artificial increase is at least unnecessary. When, however, the season is generally a good one, but by reason of want of moisture, or from some other cause, natural swarms appear but sparingly or not at all, then are artificial swarms of great use, and so also are they towards the expiration of the summer.

The winter of 1865-6, was the reverse of the preceding one. Being very mild, the stocks were good in the spring, and in May showed unwonted strength, but swarms in warm localities were a rarity. The cause was the continuation of dry weather which promoted the carrying in of honey more than the deposit of brood. This was also aided by the unusual cold which occurred after the 20th of May, so that for several days there was not only frost, but tolerably strong ice. Stocks already able to swarm were entirely discouraged, and began to tear out their drone brood, so that with many Italian stocks which had the superiority in respect of providing me with early drones, the ground was covered an inch deep in drone brood. Only one stock gave out a single swarm on the 25th of May, the day after the last hard frost, and another did so in June. The weather, however, soon changed for the better, and the bees had again a rich pasture, but they had lost the desire of swarming for this year, and busied themselves only with the collection of honey. In due time I formed artificial swarms which made very excellent stocks. Those formed early have completely furnished their hives, and have gathered far more than the necessary quantity of honey. I have by this obtained more than a hundred excellent stocks, and by this again filled up the gaps in my apiary, which had arisen through the destructive weather of 1865. If the old stocks which have furnished bees and brood-combs for the formation of the artificial swarms, have collected somewhat less than if they had remained untouched, yet the result will be far outweighed by the produce and value of the artificial swarms. It is accordingly proved by experience, that in a good year—i.e., one in which the honey harvest is protracted, a mother stock together with the swarms originating from it, produces more than the same stock would have done had it remained undivided. Dividing at the right time will, therefore, produce more worker bees by the increased number of stocks, and develop greater industry in the bees themselves than when they are united in too great masses in one stock.

Although it is advised by one party to make artificial swarms only so long as the apiary is increasing, and then to wait for natural swarms, it is not easy to perceive why such advice should be given. What brings profit with a small number of stocks cannot possibly be disadvantageous with a greater. It is not the number of stocks, but the weather and the pasturage which must be the guide and measure. Also, no bee-keeper will bind himself to a fixed number of stocks when it lies in his power in the autumn to prepare as many stocks for winter as he finds good. I would, on the contrary, advise the diligent formation of artificial swarms in a well-filled apiary, in order to divide the work, and to prevent the flying together of too many swarms; for what work it gives in a large apiary when during swarming time, after several unpropitious days, a swarm-

ing day at last makes its appearance is universally known. With a large number of stocks, artificial swarming is manifestly both profitable and convenient, for while one takes the queen from one stock, from another a portion of its bees, from a third a brood-comb, and in this manner establishes so-called put-together artificial swarms, he does harm to no colony, and yet obtains the most splendid young stocks. By this temporary and trifling drain over-strong stocks are checked in their preparations for swarming, whilst nearly equal industry is maintained, and so not only does the produce increase, but also the lasting prosperity of the stocks is insured, since little by little the superannuated mothers are removed, and strong young ones become bred in their place.

It is hardly necessary to remark, that it is only in hives with moveable combs, that all the advantages herein signified, are to be attained. In hives with immovable combs artificial swarming is difficult, and had better be avoided. Here at the best driving only is practicable, but this frequently fails just in those cases in which it would be most useful—i.e., when it is desirable to remove a weak old queen.

Extraordinary advantages and conveniences for artificial swarming are offered by two apiaries about a half hour's walk from one another, with this help, each fertile queen is easily furnished with a corresponding quantity of bees from some of the strongest stocks, after which the swarm is taken to the other apiary, and established there. The difference between it and a natural swarm is only this, that the bees have not provided themselves so abundantly with food. For this reason it is well to furnish them with a honeycomb, or to give them honey to prompt them immediately to the first play and to gathering. It is well, also, to furnish them with a brood-comb, because then the colony is certain not to forsake its dwelling, and will the sooner defend itself from all attacks.

In this way nearly all my artificial swarms have been established, and not one has failed. From a good stock one can take by degrees in the course of a summer, an incredible number of bees, and during a protracted honey season the number of colonies may be multiplied to an extraordinary extent.

The transport of bees is also rendered very easy, by removing heavy combs, and substituting well-secured empty ones, which will endure any amount of violent shaking and jolting.

He who has not two distant apiaries at his disposal, and has no opportunity of placing artificial swarms with a friend in the neighbourhood, will do well to occasion artificial voluntary swarms by taking away the queen only from a strong stock. By means of the after-swarms which the stock will give in about fourteen days, when the weather is not too unfavourable, or when they are supplied with food, stocks can be established. In order to obtain more swarms, one should be able from the first, if they are strong, to give back a portion of the bees to the mother stock. Indeed it only comes to this, through an independent, if also weak swarm to form the foundation of a stock. By the gradual insertion of brood the stock can be raised to any strength desired, and by the continuous supply of food may become the best brood-stock. Experience having proved that second and third swarms possess excellent mothers, they are, therefore, especially worthy of being strengthened so as to be able to go through the winter.—DZIERZON.

THE HONEY SEASON IN LANARKSHIRE.

This year has been throughout a most untoward one, and so uncertain were we of a fine day, that not unfrequently after the barometer had been rising and well up for some days, we would find the morning ushered in with squalls and rain. The fact is, all our weather guides were at fault, and although at times we could not say that the thermometer was low, still the air wanted that serenity which accompanies fine weather, the sun being most obscured throughout the season.

Our crops showed a very great want of that golden colour so pleasing to the eye in autumn, and so much did our flowers suffer from the want of sun, that, for example, Sweet Peas were six months in the ground ere they showed bloom. There was a great paucity of flowers of all kinds, and particularly of our best bee flower, white clover, and the bees had, therefore, to betake themselves to the trees, gathering the honeydew amongst the aphides, which when stored was in fact as dark as treacle. Most of their work was from 3 A.M. to 9 A.M., this being the only time when they could collect honey. Although bees have this year maintained themselves from honeydew, it must have been for the want of flowers, as if these had been

there I do not see why they should have left the feast which Nature had provided for them, and betaken themselves to the trees amongst the sooty aphides. At all events it is the first year, and I hope it may be the last that will come under the observation of—A LANARKSHIRE BEE-KEEPER.

OUR LETTER BOX.

HAMBURGH PELLETS LOSING THEIR TAILS (P. P.).—We imagine your Hamburgs do not shed their tails, but they pull each other's out. Separate them, and give them some lettuce to eat.

FATTENING RABBITS (Subscriber).—Give carrots, oatmeal, oats, and bran, and a little water at times.

AGE TO WHICH FOWLS CONTINUE PROFITABLE (Harriet).—Hens may be kept four years, and cocks as long. Old hens often make the best sitters and mothers.

DUCKWING BANTAMS (Spec).—The dark marking on the back of your Duckwing Bantam is a grave fault, and in close competition would be fatal. It is the result of the cross. They would pass in slight competition.

FEEDING OWLS (Idem).—Feed Owls on sparrows, mice, pieces of rabbit, anything that has feathers or pelt. Owls require this, as they throw up castings like other birds of prey.

BILLS OF ROUEN DUCKS (A. H.).—In both sexes the bills should be of the colour of those of Wild Ducks. In them the mallard has a yellow bill shaded over with light green. Any slate colour in the bill of duck or drake should disqualify.

PLUMAGE OF SILVER-SPANGLED HAMBURGH COCK (H. B.).—He need not have a clouded hackle. It is the hen that must not have a clear one. The great points in the cock are—a well spiked and not over-large comb, piked behind, the pike turning upwards, well and firmly set on the head, inclining to neither side; a white deaf ear, not larger than a sixpence, if no larger than a fourpenny piece so much the better; breast well spotted, black and white; wing barred, and, in our opinion, laced, if possible; tail quite white, each feather spotted or mooned on the tip.

CROSS BETWEEN DARK BRAHMAS AND DARK DORKINGS (Idem).—We approve of the cross you have adopted. It makes an excellent bird, much better as a table fowl, than a Dorking cock and Brahma hens. You may if you please let the pullets run with a Dorking cock next season, but you must bear in mind each time you do so, you are drawing nearer to the pure Dorking. Thus, the half-breeds of 1868 put to a Dorking cock in 1869, will produce chickens with only one out of four parts of Brahma, and so on, diminishing every year, till at last there will be no appearance of Brahma origin, nor would its existence be known, did not a throw-back now and then give proof of it.

INDIAN GAME FOWLS (A. L. E.).—“The Indian Game fowls are Black-breasted Reds, Ginger Reds, Gingers, Brown-breasted Reds, and Ginger Brown Reds; the first two sorts generally, though not always, with red eyes and yellow legs, and red combs and faces; the Gingers always with yellow eyes and legs, and yellowish combs and faces; and the two last-named sorts with dark eyes, dark legs, and dark gipsy combs and faces. The Black-breasted Reds are—some bright red, some light ginger red, and some darkish red. Their hens are of a reddish Partridge-brown colour of various shades, with golden hackles and reddish fawn or reddish bay breasts. The Ginger Reds are bright red gingers; the cocks' breasts red ginger, the hens' breasts ginger. The hens are of a light ginger red colour with yellow ginger hackles. The Gingers and Pencilled are of a yellow ginger colour, with hens like those of the Ginger Reds, though less red. The Brown Reds are dark birds; hens of a dusky dark brown, pencilled all over. The Ginger Brown Reds are lighter again in colour than these, with the hens also rather lighter, but of the same colour. These colours are also the primitive colours of our English Game fowls. The average weight varies, but is also much the same as that of our English birds. The number of spurs makes no difference in their goodness. They are in general not so well shaped, less handsome, and less high-couraged than English Game, and more resemble the smaller Malays, though quite distinct from any Malays. Colonel Mordaunt's English Game fowls, however, in 1827, were beaten in India by the Indian Game birds; but then his birds had, probably, suffered by his long sea voyage to India. At some future time a full description of the Indian Game fowls will be in the Poultry Chronicle, and also of the various sorts of the Gallus ferrugineus, or the Red-brown Wild Jungle Fowl of the East Indies.—NEWMARKET.”

FEEDING DUCKS (T. W. E.).—Ducks fed on grain lay very well; but they, as well as other birds, want change of food, and thrive better when they have it. Aylesbury Ducks lay more eggs than the Rouen, but they do not sit. There is more nutriment in Ducks' eggs than in hens' eggs.

BRAHMAS FOR EXHIBITION (J. S. B.).—From the description you give of the bird you bred of Ellis's strain, he is fit only for the cook. He is neither fit for stock nor exhibition. You may exhibit “Pickles” bird with good hope of success.

KALEGE PHEASANTS—JAPANESE PEA FOWLS (A. L. E.).—Kalege Pheasants are natives of India, the Himalayas. The cock is blue and white; the hen brown. In shape, crests, and size, they more resemble the Silver Pheasant than any other of our acclimatised breeds. They have also the gait of them. The Japanese Pea Fowl differs from the common inasmuch as it has no plain feathers. The wing that is a plain brown in the ordinary bird, in the Japanese is covered with beautifully shaded bright green and blue feathers, each being marked in outline by a brilliant and shining rim. There is not a plain feather in the plumage. The White Pea Fowl is the most valuable. They are said not to breed till they are two years old. It is a disputed point, and we believe it true only of the male. They lay once in the year, and are natives of Asia. The Wonga Wongs have been tried at liberty, but we have never heard of their breeding.

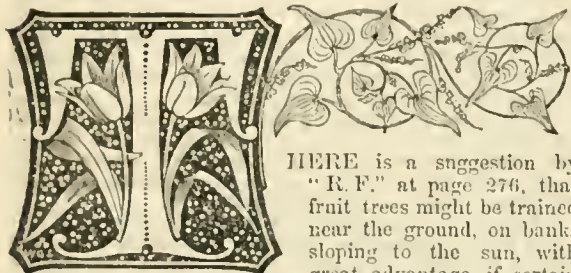
MORTALITY AMONG CANARIES (W. H. H.).—The numerous deaths of your birds have been caused through exposure to the inclemency of the weather. The weather lately has been far too cold for canaries to be in an outbuilding, and a sudden change from warm to cold will oftentimes cause the birds to drop off. To keep canaries in health the temperature should not be below 46° Fah., although they may be trained by gradual exposure to endure a much lower temperature. An addition of a small quantity of bruised hemp seed and a little maw seed, mixed with hard-boiled egg chopped fine, and a few groats, is recommended, but no green meat, and most probably after a few days a great change will be observed.

WEEKLY CALENDAR.

Day of Month.	Day of Week.	DECEMBER 5,—11, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
5	Tu	Meeting of Linnean Society, 8 P.M.	48.8	31.8	41.8	23	51	7	51	43	8	41	1	mor.	9	9	18
6	F		48.1	36.5	42.3	19	52	7	50	3	34	1	6	all	10	9	53
7	S	Royal Horticultural Society, Promenade.	48.5	36.5	42.5	20	53	7	50	3	1	2	15	2	11	8	27
8	SUN	2 SUNDAY IN ADVENT.	46.9	34.2	40.6	18	55	7	49	8	31	2	27	3	12	8	1
9	M		46.8	35.4	41.1	16	56	7	49	8	5	3	41	4	13	8	84
10	Tu		46.8	32.9	39.8	21	57	7	43	8	46	3	57	5	14	7	7
11	W		46.0	32.8	39.4	16	58	7	43	8	35	4	11	7	0	7	43

From observations taken near London during the last forty years, the average day temperature of the week is 47.4°; and its night temperature 34.7°. The greatest heat was 60°, on the 7th, 1856; and the lowest cold 14°, on the 5th, 1841. The greatest fall of rain was 1.02 inch.

TRAINING FRUIT TREES SLOPINGLY.



HERE is a suggestion by "R. F." at page 276, that fruit trees might be trained near the ground, on banks sloping to the sun, with great advantage, if certain

principles were kept in mind. In order to corroborate the truth of "R. F.'s" idea, and at the same time to warn those who may think of carrying it out, will you allow me to give my experience? It is not very perfect, certainly, yet it may tend to throw some light on the subject, and some knowledge may be gained from the statement of a few simple facts, even though they be, as at present, much more nearly allied to failure than success.

At Broughty Ferry, in Forfarshire, fruit trees trained against the rocks give earlier fruit than trees against walls; and in the neighbourhood of Forfar a nurseryman, many years ago, had his trees trained down upon stones laid on the side of an abrupt dell, but of his success or non-success nothing can now be said, as all the trees have long since been torn up.

Having read in one of Messrs. Chambers's works a suggestion that fruit trees would succeed if grown and trained upon an artificial bank composed of pebbles properly sloped, and remembering the superior earliness of fruit grown upon the Broughty rocks, I resolved to put the idea into actual practice.

Before proceeding further, however, it is necessary that all requisite information be given as regards locality, &c. We are 330 miles due north of London, 1½ mile from the North Sea, and 260 feet above the sea level. Soil red, light, of good quality, upon gravel, and the trees are subject to canker when the roots enter it. No good Pears will ripen on standards, except the Hessel, which in favourable seasons is very good. Against walls sometimes good Pears may be had; but as wall-room is scarce here, the suggestion of a slope was at once acted upon, as, from its lowly nature, it would be comparatively little seen.

Selecting, therefore, a gently sloping bank for the purpose, the earth was simply laid back from the front, so as to intensify the natural slope, which was now 2½ feet high at back, 8 feet in breadth, and 80 feet in length. It was simply laid with common bricks on the flat, the seams pointed, and all was ready for the plants. These were obtained during the autumn of 1861 from Sawbridgeworth, and consisted of maiden trees of the very finest late varieties, many of them newly sent out. These were all upon Quince stocks, and were laid back upon the bricks to be trained up with five limbs, or cordons as they must now be called. Some of the plants looked considerably the

worse of the preceding Christmas of 1860—ever memorable—but on the whole looked well when pegged down, and my hopes of success were high.

The very first spring, that of 1862, brought a rude shock to my sensibilities—ten per cent. of the bricks had given way from frost; the mortar had frozen, and the nails and pegs being loose, the branches of my trees were all dangling in the air. The bricks were replaced, and the branches pegged down with wooden pegs driven down between the bricks, and so they looked well again.

Next year (1863), a few more bricks were spoiled, but these were easily replaced by better burned ones. The trees, however, were the greatest annoyance; they were difficult to train, as the slope was too slight, it ought to have been 3½ feet at back instead of 2½ feet; the consequence was they could scarcely be pegged down, they would grow upwards. Even this difficulty could have been surmounted if the trees had been healthy; but to add to the misery of the whole business, canker made its appearance on almost every tree. The fineness of the sorts, the exposed position, which, by laying the trees open to the autumn and winter cold, prevented the ripening of young shoots, the soil itself, and, lastly, the northern climate, each and all brought the dreaded enemy into existence. In a fit of the most intense disgust I turned my back upon my late favourites, and allowed them to grow as they liked.

During 1864 no care was bestowed upon them—nothing done for them. I thought care would be thrown away, yet did not wish to grub them out; and then I thought I might build a wall for them, as it was a pity to grub out such fine sorts. Meantime the trees were allowed to grow at their own will, and unbecomingly they would have embellished the garden of the sluggard.

In the spring of 1865 a lingering affection for my discarded *protégés* induced me seriously to consider whether glass would not be a remedy for all the evils of the sloping system, as thereby radiation would be checked. About the middle of March a curate's viney was placed over a Beurré d'Arenberg tree in order to give us an idea upon the subject. The result was a couple of Pears of the ordinary size, which ripened in due course, and were of exquisite flavour.

Thinking that the wood might ripen better if the viney was kept on all winter, it was never removed, and next spring (1866), the tree was covered with the most splendid bloom, most beautifully developed, yet only two Pears set; they grew, however, to an immense size, quite as large as French Pears; but although quite melting, juicy, and refreshing, the flavour was not so high as in the preceding year, owing, very probably, to the want of exposure before pulling, or, perhaps, they had been pulled too soon.

The result was of so comforting a nature, that half a dozen of Mr. Kerr's pattern (3 feet by 8), were provided for next spring (that of 1867), and the viney placed over another tree. The return was sixteen Pears of Beurré d'Arenberg, the other trees having been covered too late to do good this season. The sixteen Beurré d'Arenbergs grew fairly till July, when the lights were taken off to expose the fruit

to the influence of the weather, for flavour, so that last year's mistake might not again be committed. This, however, proved to be only another mistake to be added to the already long category. The fruit, not having swelled, was in too delicate a stage to withstand the trying weather to which they were exposed, and consequently cracked before ripening. Although of fair size and flavour, they were by no means calculated to please critical eyes or palates; nevertheless the "bairns" made short work of them, and even the elders did not disdain to share.

So convinced am I that the system will be a great success here in the north, that all my hitherto-neglected trees will now be regularly nailed down to small wooden bars, pegged down with iron pegs from front to back, five limbs to each tree. The lights will be kept on all the year through, excepting only September and part of October, according to the season when the fruit ought to be pulled. The lights will be again put on immediately the Pears are pulled.

I may now state that the lights are 18 inches from the bricks, and in spring the current of air is so strong that it will be necessary to put up boards along the front in windy or frosty weather.

A friend of mine was warned some time ago by an eminent northern fruit grower, who had gained chief honours in London in competition with all comers, against growing Pears under glass, as there was no flavour; but, however much of truth might be in this assertion as regards glass houses, there can be little or no application of the phrase to a slope from which the lights can be removed, so that the fruit may be exposed to the direct influence of the weather when wanted—a principle which, when properly carried out in practice, combines the assured crop of a protected tree, the size of wall fruit, or even larger, and the flavour for which standard trees are pre-eminent.

In the genial south glass-lights will scarcely be thought of for Pears, and Peaches will likely be substituted; but here in the far north, many will probably try to grow both Pears and Apples by such means, if only well assured of a crop.

I have mislaid the actual cost of the slope, and cannot now state exactly what it was; suffice it to say the original cost was trifling, and the lights cost here 12s. each, although they will be considerably cheaper towards the south. Each light covers a tree.

Although in this communication there has been little but comparative failure to record, I yet consider that I am on the threshold of success, and that better luck will come with another and a better year to renovate somewhat an enthusiasm which had begun to cool under the depressing influence of continued failure; and at present I really do believe, that by careful management, we can grow Pears quite as large as French Pears (having already grown them), and with flavour not to be surpassed.—K. K.

VINES—TOP AND BOTTOM—PERPLEXITY—HOPE.

As an acknowledgment for the services of a friend who weekly brings "our Journal" from the stationer's of the town, a few miles distant, I give him the privilege of opening the paper and perusing its contents. The various articles on Vine culture arrested his attention, and ultimately he became so fascinated with the matter that the very sight and sound of Vine culture acted as a charm, and propelled him to the irresistible conclusion to become a Vine grower himself, confident that the same concentration of energy and persistent industry, which, step by step, raised him from the plough to the workshop, and eventually to a flourishing business and a freehold house, would reward him with a fair share of success in his new undertaking.

His mind once made up, work became the order of the day. Materials were forthwith procured, and shortly two structures were erected, consisting of upwards of 2000 feet of glass. A boiler was fixed, and hot-water pipes were put together by his own hands by candle light during the long winter evenings. A smoke-shaft was formed of large sanitary-pipes, and run round by the side of the hot-water pipes, thus economising all the heat. Ventilation was provided by opening the entire front and back of the house, and worked by leverage. The whole of these structures were worked from plans of his own. A crop of Ash-leaf Kidney Potatoes was taken from the border inside, realising £5 within seven months from the commencement of preparations. All this, done with the assistance of one

man, and at odd times, and in over hours, was justly regarded as a satisfactory beginning.

And now to border making. Here his perplexities began, for on reverting to the back numbers of the Journal, and attentively reading up all which had any bearing on the case, he became positively bewildered. What with opposing schemes, conflicting practices, apparently irreconcilable statements and processes, was it not enough to damp the ardour of an enthusiast thirsting for knowledge? His days and nights of study and labour, and his diminished balance at the bankers, began to haunt him; his bright anticipations were deepening into gloom, and for the first time in his life, perhaps, he lost confidence. In his perplexity he came to me, and laid bare his whole case. Much was made plain to him, much remained still in doubt; however, every point was discussed, and it was ultimately decided that for an outside border 2½ feet deep would be ample, 1½ feet below, and 1 foot above the general level of the ground. Half the length of the border was forthwith excavated; the bottom was laid with flat tiles drawn with mortar and cement, and with a slope towards the front, and a few inches of broken stones were placed on the tiles. Turf about 3 inches thick, rather light than heavy, was procured and mixed in with about one-sixth of old mortar rubbish, and a liberal blackening of soot, perhaps about one-twentieth of the entire bulk; no bones being used in this, but reserved for the other half of the border, which will be finished at a future time. This depth of border, all alike good, and to be enriched with top-dressings when occasion may require, I believe capable of growing good Black Hamburgh Grapes.

For the house intended for Muscats, a different mode of procedure was determined on. The border is inside the house, and nearly 6 feet deep. This depth was considered necessary on account of the comparatively small size of the border, 23 feet by 16 feet, and having to support sixteen Vines, for it must be understood that three sides of the house are glass, and Vines are to be trained up the north wall as well. Good drainage was secured, and 18 inches of stones put in the bottom. Precisely the same mixture of soil was used as for the outside border, only containing more opening material in the shape of five quarters of good lumpy charcoal; this, mainly on the point of cheapness, was preferred to bones. It can be purchased at less than half the price, and I think will answer the purpose equally well. Bones have two actions, mechanical and chemical, their chemical value depending, I believe, on the phosphate of lime which they contain. This phosphate, however, being so nearly insoluble affords a stimulant to the Vines so homœopathic in character as to be scarcely perceptible, except under the influence of an acid, and the application of this would soon reduce their mechanical action to nothing. Charcoal, on the other hand, will, I think, be allowed to be as imperishable in its nature as bones; it will, therefore, serve the same purpose mechanically, while, chemically, it is principally valuable on account of its property of fixing ammonia, and also by its combining with oxygen and generating carbonic acid, a primary essential of the food of plants; but except in the presence of nitrogen, ammonia is not formed in the soil. Nitrogen is easily conveyed by saturating the charcoal in a solution rich in that element previously to mixing it in the soil. This I have done. It is thus, I think, that charcoal is as good as bones, in being equally durable, stimulating, and porous.

And now to the top part of the question, and here my pupil was equally at fault, and the almost recriminatory articles on temperature, and the antagonistic opinions of the authors, only added to his discomposure. His perplexity was further enhanced by a short tour of Vine inspection, where he witnessed Vines growing in carefully made borders presenting anything but an encouraging aspect, while others looked well, though growing in haphazard borders, as he termed them. "How do you account for it?" was his reasonable exclamation. "There is something wrong somewhere, and instead of the writers telling it, they amuse themselves by pitching into each other." In was in this frame of mind I left him. His next visit was one of hope, which was visible on his countenance, when he brought me the number of November 14th, with this observation, "There is a bomb in the camp, Mr. Pearson has hit the target. I hope he will shoot again, and when the smoke disperses I shall see my way clearly." I, too, hope he and others will write again, for I am decidedly of opinion that there is much to be learnt on the summer management of Vines. Perhaps I may add my mite, perhaps not. I am not a Grape grower, in the popular acceptance of the term, the extent of my obligations—indeed, my orders are explicit—is to grow plenty of small bunches of good

fruit for the table. This I do as economically as possible. I cannot hope, therefore, to say much, neither can I gather much of the opinions of others, except through "our Journal." I—and I may as well out with it—have a domestic vine and several olive branches, and this circumstance curtails my library, and has prevented me, as yet, enjoying "Thomson on the Vine," and other authors. This, however, is not a source of unmingled regret. Does not a family afford an incentive to zeal of the most natural and forcible kind? This I am glad is becoming more recognised by employers. A man with his heart in his business, and who can supply himself with books, may have the advantage; but a man whose heart is in his business, and is backed by half a dozen hearts at home, each more dear than his own, possesses an inexhaustible mine of power and energy which no other source can supply. Would that employers would become more cognisant of this; not only see, but feel it; then the uncharitable stipulation of "no encumbrance," would soon become a thing of the past.—J. W.

MR. SALTER'S SEEDLING JAPANESE CHRYSANTHEMUMS.

In the last number but one of the Journal there is a short description and allusion to these very interesting and curious flowers; may I be allowed a short space to invite the attention of all lovers of plants to these extraordinary specimens? Persons who have been accustomed to view the Chrysanthemum as a florists' flower might at first sight condemn their rugged appearance, but upon closer inspection they will find much to admire in the thread-like florets of various hues, somewhat resembling the long tentacula of the Sea Anemone. There is every shade of colour which the Chrysanthemum assumes—some mottled or variegated, others dark on the upper surface and light underneath. The form of the buds is very peculiar, the florets taking an upright direction when first coming out.

A visit to Mr. Salter's nursery at the present time will amply repay the trouble of making a journey to Hammersmith.

For decorative purposes this last new style of Chrysanthemum will be likely to prove very useful, and the varieties will not be without their admirers. From what Mr. Salter states, these seedlings were produced from *Chrysanthemum roseum punctatum*, a Japanese plant introduced into England by Mr. Fortune.—X.

PROPAGATING PELARGONIUMS.

COMPLYING with your request at page 311, I will now detail my mode of propagating the Pelargonium. It is very simple, although I am perfectly aware that every one has not the same means at command as I have, but generally such exist where large numbers of Pelargoniums are wanted.

As I have already stated, I never begin propagating till the last week in August. I have by that time a number of Melon frames at liberty; the old Melon plants are cleared out, and about one barrowload of leaf mould and half a barrowload of sand are placed on the old soil left in the frame, and mixed with it for about 4 inches deep. The surface is then levelled and well watered, after which all is ready for the cuttings.

I commence first with the most tender varieties, such as Golden Chain, Golden Fleece, Mountain of Light, Honeycomb, and, indeed, all the slow-growing sorts, then follow with the more robust. Generally three persons are employed in making the cuttings and one lad in inserting them. In doing this he takes hold of the cutting about 2 inches from its base, and pushes it down with his finger and thumb, leaving a small hole where the finger and thumb have been. A lad can put in the cuttings nearly as fast as three persons can make them. When one light of the frame has been filled, he takes a watering pot with a wide-holed rose, and gives the bed a thorough soaking, and puts on the sash at once. The second and all the rest of the lights are filled in the same manner, and all the sashes put on after watering. Should the weather prove dull no shading will be required; but if, on the contrary, it is very bright, a slight shading will be very beneficial. On no account, however, give air at any time until the cuttings begin to grow, when it may be admitted very gradually, and at the expiration of three or four weeks they will be well rooted.

The potting of the rooted cuttings with me depends to a great extent upon circumstances; but as soon as possible I have them potted, and take them at once back to the pits or frames, where they remain as long as the weather will allow.

They are then housed, and at the present time I have as fine a stock of young plants as if they had been rooted and potted off by the time I commenced putting in my cuttings. I struck about two hundred cuttings early, and at the present time they are certainly larger, but not so healthy-looking.

Last year, thinking that I might save time, I put in the cuttings in pots at once, and placed them in the frames, treating them in every other respect like the cuttings inserted in the soil, but the result was very different. I lost a much larger per-centage of the cuttings, and the plants did not become so strong in the autumn; and what little growth they made in winter was very spindling and weak on account of the soil becoming so hard and close, while there was no root-action when the cuttings were striking. I have, therefore, returned to my old plan this year, and although it involves a little additional labour, this is more than compensated for by a strong, healthy, dwarf, clean growth instead of the weak growth mentioned above.—JAMES STEWART, *Nuneham Park*.

SUCCESSIONAL PEAS.

THE past has been one of the most successful Pea seasons I ever had, and I forward you a statement of the results.

You will perceive that I commenced gathering Peas on the 21st of June. From that date to the 19th of November, when I gathered my last dish from *Ne Plus Ultra*, I have no hesitation in saying that I have had a succession of very superior Peas. My greatest foes have been the sparrows, and they select the choicest Peas.

Much is said about new varieties of Peas, but I am no hunter after novelties. If I had *Ne Plus Ultra* along with *Veitch's Perfection*, I would seek no further for summer and autumn Peas.

Sangster's No. 1, sown November 12th, 1866; in bloom May 9th; gathered June 21st. Made good growth and was well podded; the pods well filled with good-sized Peas of excellent quality. It continued a long time in bearing, growing with me 5 feet high. An old but useful variety.

Diekson's Favourite, sown November 12th; in bloom May 30th; gathered June 28th. A good strong-growing Pea, yielding a good crop of large, well-filled pods, of very good quality. It grew with me 5 feet in height. A very useful standard variety.

Dillstone's Prolific, sown November 12th; in bloom May 5th; gathered June 14th. A rather slender-growing variety, the pods short and well-filled with Peas of good quality. Its coming into use a few days earlier than the preceding is a point in its favour, but it soon ceases to produce. Height about 3 feet.

Dillstone's Prolific, sown February 5th; in bloom May 23rd; gathered June 26th. Much stronger than those sown in November; larger pods and Peas. I think it is a very good early variety, growing 3 feet high.

Double-Blossomed Frame, sown February 23rd; in bloom June 14th; gathered July 18th. An old but useful kind, which bears hard usage and yields a good crop of very fair quality. Grows about 5 feet high.

Prizetaker, sown February 23rd; in bloom June 22nd; gathered July 18th. A most excellent crop of first-rate quality; fine pods, well filled. It must be used young. One of the best second-early Peas, growing with us about 6 feet in height.

Princess Royal, sown April 9th; in bloom July 1st; gathered July 27th. One of the finest crops I ever saw. A strong-growing Pea bearing almost to the ground fine large pods, generally well filled with fine large Peas of good quality. It very much resembles *Veitch's Perfection*; it continues long in bearing, and grows about 4 feet high.

Yorkshire Hero, sown April 9th; in bloom July 1st; gathered July 27th. A very dwarf-growing variety of strong habit, podded nearly to the ground, very prolific; continues to give a succession of fine Peas for a length of time. An acquisition to those who have a difficulty in obtaining stakes. Height 2 feet.

Veitch's Perfection, sown April 26th; in bloom July 13th; gathered August 5th. One of the very best Peas in cultivation; a strong grower, producing large, well-filled pods. The Peas large, tender, sugary, and of first-rate quality. About 4 feet in height.

Ne Plus Ultra, sown May 9th; in bloom July 27th; gathered August 23rd. A very fine, tall-growing Pea, with large, well-filled pods. The Peas when cooked of a beautiful green colour, so desirable in first-class Peas. The height this Pea attains

(10 feet), is a drawback to it, especially in places exposed to wind; but I am of opinion that any amount of labour bestowed on it will be well repaid by its productiveness.

Veitch's Perfection, sown May 9th; in bloom July 27th; gathered August 19th. Remarks as above.

Ne Plus Ultra, sown May 27th; in bloom July 30th; gathered August 28th. Remarks as above.

Fortyfold, sown June 6th; in bloom July 30th; gathered August 30th. Sown June 16th; in bloom August 14th; gathered September 8th. A tall-growing Pea of very good quality and very productive, having large, well-filled pods, but not equal to Veitch's Perfection or Ne Plus Ultra. Height 10 feet.—M. H., *Acklam Hall, Middlesborough-on-Tees.*

GENERAL MANAGEMENT OF A GROUND VINERY.

THE great advantage of the ground vinery as first introduced by Mr. Rivers is, that besides planting, pruning, training, and thinning, the vinery may almost be left to itself, requiring no air-giving, syringing, watering inside, &c., which occupy so much time, and require such constant watchfulness in common houses. On the whole, I look on these vineries as chiefly useful for amateurs and tenants who do not want and cannot afford much outlay, and who yet wish to have a few Grapes for themselves and friends, but could not put up a house.

I am aware of several disappointments caused by expecting too much from a Vine during the first or second season after planting; but continued success will greatly depend on cutting the Vine, when planted, well back, say a six-foot rod to 2 feet, and taking only a bunch or two the first season. Cut back to 4 or 5 feet next year, and take half a dozen bunches or so. This will lay the foundation for continued fruitfulness and good success. Much also will depend on the planting, which is best done at one end. The soil should be good, sweet, and well manured with a peck or two of crushed bones, rich dressings on the surface being also given every season, and, above all, dryness at the roots must be secured, so that rains and manure waterings will pass freely without standing about the roots.

Ground vineries may be made of any size—either like the old curate's vinery, with sides without bars, and all in a piece, they being moved off or tilted up on one side when work has to be done; or, like those of Mr. Wells, they may be hinged on the sides, so as to permit of work being done in them without moving. It matters little, however, in which form they are if the simple idea is to be maintained, which I take to be allowing the vinery to look after itself to a considerable extent. I may just add, that of those I have seen the best results seem to attend, not those with a trench below the Vines, but those where the ground inside is covered with slates between the bricks at the sides, and where the Vine stem, instead of lying on the slates, is trained to a neat wire held up by pins 8 or 9 inches above the slate. For such a mode of growth the vinery should be 3 feet wide, and 18 to 20 inches in height at the ridge. When a single Vine is to be pegged down to the slates the house may be 30 inches wide and 15 inches in height. Whatever the height, it may easily be added to if more room is necessary, by placing another row, or even two rows, of bricks at the sides.

As bearing on the general management, I may here reiterate what has already been alluded to, that unless to free the Vines from dust, &c., a ridged ground vinery need never be moved for the purpose of syringing, &c.; as after a hot day, and a clear night especially, the leaves of the Vines will be damp enough in the morning from the vapour that was raised from beneath the slates and having become condensed, which invisible vapour would rise all day, and the more in proportion to the heat of the sun. I had the pleasure of convincing one who would not believe a similar fact, by placing some large bell-glasses on flagstone pavement, making them air tight at the bottom by means of putty; and though the spaces beneath the glasses were dry enough during the day, they were damp enough the following morning. The moist vapour would ascend much more easily from the earth by the sides of and through the slate, than through flagstone pavement.

As regards ventilation, that is provided for by the row of bricks placed edwise, with openings between them, on each side for the little ridged house to stand upon. In cold exposed places from 2½ to 3-inch openings will be enough. In warmer, more sheltered places, but with full exposure to sun, 4 inches

will be required; but for a warm exposure 4½ inches will not be too much; and this distance will be important, as then, not for the Vine in summer but for other purposes in winter, it might be necessary to shut off the air altogether. These openings I would leave from the budding of the Vine until the cutting of the fruit. In dull weather and cold positions in autumn it might be advisable to plug up the half of the openings in order to obtain more sun heat, but in the generality of seasons that will not be required. Such openings will secure the heat from the brightest sun rising gradually, and the temperature will decline gradually after the sun gets low. It is not the high temperature that the Vine suffers from in houses, but it is the heat increasing so fast, and pent-up vapours along with it, when air is not given early. These openings will keep all right without help or care.

With respect to taking off the glass for the winter, unless particularly wanted for other purposes, I would say, Do not remove them at all. The Vine will be all the better for that protection, though in some parts of the country the Vines might have a little protection in severe weather, and the glass be used for other purposes; but many things might be put under the ridges as they stand, and do no harm to the Vine after it was pruned, and then if these subjects would be injured by a frosty air, the half bricks I have referred to might go into the openings at night and be removed for ventilation. In cold places in the north I would stop up these holes in severe weather in winter, as the cold, though intense, will do little harm to such plants as the Vine if the air about it is kept dry and still.

Again, it matters not whether the Vine during the winter should lie on the ground, or rather slates, or be fixed 8 or 9 inches above it. In very cold places, as stated above, I would stop the ventilation in severe weather. In a mild climate I should consider it quite unnecessary, so far as the Vine was concerned. And, once more, with such openings between the bricks I do not consider that any other ventilation will be necessary; but, if at all doubtful, a small triangular piece might be removable at each end, just under the ridge.—R. FISH.

PEACH STONES SPLITTING.

FOR the last two years the stones of most of my Peaches, in pots, in orchard-houses, have split; though I am not aware that there has been any material difference in their treatment from former years. Some are in an unheated house, some have a little atmospheric heat, some bottom heat, but they have all suffered more or less. The cracking is usually said to arise from watering with cold water in the spring. I never use chilled water. The kernels are generally sound.

Allow me to take this opportunity of recommending that most excellent new Peach, Dr. Hogg, to any amateur who desires a really valuable novelty.—G. S.

[In our in-door treatment of Peach trees we let the soil get tolerably dry in the beginning of winter, but we like to have the soil well moistened just before fresh growth begins to manifest itself. That is the only early time when we use common water, say from 40° to 50°; but even then we would prefer the water to be heated a little, but it would be inconvenient. After that the plants in heated houses receive water in temperature from 60° to 75°. When in bloom we have the surface dry by raking the ground, water as wanted after that, and the most particular time to insure the stone being all right is to give a good watering as the stoning commences, and not much more until it is finished. In our own practice, the stone-splitting has most troubled us when we gave heavy waterings during the stoning period, and since we avoided that as much as possible we have hardly had a split stone. By that time common water will be warm enough when the forcing is not early, but during stoning, and before the hardening is effected, it is not advisable to use too much, hot or cold. This may be prevented by watering well before the fruit's commencing to stone, and after that is finished. Will some of our readers give us their thoughts and experience on the subject?]

RED BEET AS AN ORNAMENTAL PLANT.

I SENT out some fifteen years since, Henderson's Short-top Garden Beet. It is a short-topped Beet, and the leaves are of a dark colour, and hang down to the ground, so that none of the root is seen. It may be sown as early as the first week in March, and will not put up a seed-stem the first season. I

sent Mr. Perkins, at Thornham Hall, a small quantity of seed of this Beet last spring, and I should like to know his opinion of it as an ornamental plant in a flower garden.—C. SHORT, *Flinton Park, Bungay.*

[We sent the above to Mr. Perkins, and this is his reply:—"I must say that Mr. Short's Red Beet exceeded my expectations. As a crimson-leaved plant for a long ribbon border it is most valuable. This Beet may be sown in March without any fear of its running to seed, and if protected in severe weather, it soon becomes fit for either the salad bowl or the flower garden. Its habit is very dwarf, and the leaves hang down so as to completely cover the root, which is a very important characteristic, not only in a flower gardening point of view, but as a great protection from frost, hence its usefulness in a flower garden for the greater part of November.

"The decorative character of this Beet is greatly increased when it is grown by the side of Variegated Pelargoniums, Centaureas, and other white-leaved plants. The small leaves of this Beet are also very useful for decorating the dessert, for which purpose I have not heard of their being used before.

"Mr. Robson, of Linton Park, was, I think, the first to recommend Beet as an ornamental-leaved plant for the flower garden, and, perhaps, he will inform us whether he still uses it, and if so, whether he ever used the variety in question."]

FRENCH AND ENGLISH GARDENING.

WE have next (see pages 383, 384), to deal with Mr. Rivers's remarks on French gardening, taking them in detail. We have seen the tendency of his letter; we have seen how much he admired the "truths" of the "LONDON MARKET GARDENER," we shall now see what his ideas upon this subject are worth, and what are his claims to pronounce judiciously upon it, even if disposed to do so fairly. After ridiculing the various fancy ways of training pursued by the French—remember—I assure the reader that I had praised no fancy mode pursued by them or others—he comes to a definite observation:—

1. "The cordon system, so much written about, is a very old English system," Mr. Thompson, of Chiswick, having practised it for "some forty years past," and "in every good fruit garden in England fruit trees are trained after the same method!" Each of these statements is incorrect. I happened to be at breakfast with one of the best and most respected cultivators in the British Isles, and one well acquainted with gardening in all parts of the country, when I first saw the number of THE JOURNAL OF HORTICULTURE containing Mr. Rivers's article. He read it for me while I breakfasted, and upon coming to this passage well might he exclaim, "What a sweeping untruth!" There are only a few young cordons in the Chiswick gardens, the cordon system originated in France, and the system is merely in its infancy in English gardens. To call a Pear tree trained in the usual fashion on a wall a cordon, is absurd. The pinching and pruning are the same, no matter what form the Pear tree may assume; but the name cordon is only applied in France to trees kept to a single stem, or with very slight deviations from that form. The palmette Verrier, or any other popular form, may be seen with its branches trained in exactly the same way as the oblique cordons on the wall; but the cultivator never thinks of applying the term cordon to the larger forms. In fact, the very merits claimed for the system are that by planting trees very closely against a wall or trellis, and confining their energies to a single stem, the wall may be covered quickly. If the ordinary Pear tree with horizontal branches trained against a wall or espalier be *en cordon*, where is it called so in our books? It is of course no such thing either in France or England. The cordon system is not of English origin, being known to have existed in France even longer than with "the old farmer in Sussex." For the address of this gentleman I, as well as others of your readers, would feel much obliged. Not that the fact of his having trees with branches trained in the vase form, or something very like it, and grafted on the Crab, proves that he has had the least to do with the origination of the cordon system, but he is said to have produced such a wonderful result that he must be worthy of a visit. But as his system has little or nothing to do with the one modification of the cordon recommended by me, and absolutely none of its advantages, I pass it by without further notice.

2. Mr. Rivers defines a cordon as "simply a branch or single-stemmed tree with all its young shoots shortened during the summer." That is the most correct definition in his paper, but

not quite correct, for you may see in numerous French gardens the single-stemmed cordon Peach tree with the shoots laid in precisely like the trees with a score of branches. But in a recent number of a contemporary journal Mr. Rivers distinctly says that this definition (given by an opponent in discussing this question), "was simply the statement of an error." How does he reconcile the two statements? How is it possible to arrive at any useful conclusion where such tactics are pursued? Mr. C. Baltet, of Troyes, a distinguished French fruit-grower defines a cordon as a tree reduced to its most simple form—one single stem furnished with little fruiting branches.

3. In one part of the letter he praises our English climate, in another he says it is poor compared to that of France. He does this wishing to show that we "are not behind the French so far as our climate will allow." I say that we are decidedly behind the French in the culture of the Pear tree. The reader may ask, how? In the first place, our humbler and lower middle class hardly know what it is to taste a good Pear from one end of the year to the other. In France it is different; many a poor householder who cultivates his own garden in his spare hours, has a stock of Pears now gradually coming to perfection in his house that a British gardener with half a dozen assistants might well be proud of. With us the knowledge of fruit culture is confined to professional gardeners, and amateurs wealthy or comparatively so. In France it is not thus; the knowledge of good kinds and their treatment is spread through every class of society to a far greater extent than with us, and I look forward to the day when the same knowledge spread among our people will produce an equally good result. I am told that as good Pears as ever grew are obtained in this country, and that their flavour is superior to those of any other country, and then, perhaps, asked immediately afterwards, "How are we to improve? Consider our climate." I answer that if one sage individual can grow a good Louise Bonne of Jersey, or any other first-class Pear, there is no reason why one hundred or more individuals in the same neighbourhood may not do the same, and that what we want is an increased knowledge of fruit culture and its advantages among cottagers; indeed, amongst all classes. There is an enormous class of small amateur gardeners in this country who are hardly at present acquainted with a good Pear. If this class cultivated that fine fruit as much as they might, and as much as I one day hope to see them do, they would add very much to their own domestic comforts, swell their purses, and benefit the markets by selling the fruit.

But Mr. Rivers has been traversing France fifteen times or so during the past thirty years, as he tells us, and though, previous to the present discussion with me, he has always highly praised the French fruit growers, he now takes a very different course, and, perhaps, I shall be told by him, that it is the climate does all this for the French. Therefore, I will quote a letter from a very able English gardener, one who has resided seven years in France, and who was so honourably mentioned in your report of the great French fruit show—Mr. H. Knight, of Pontchartrain. Nobody can be better acquainted with the demerits of French gardening than he is. To him is due the honour of showing the French how to cultivate the Vine as it ought to be cultivated, and of making a really first-class garden amongst them. But although he can do most things better than the French, he freely admits that in some things we may well learn a lesson from them, and accordingly adopts any of their plans that seems to be an improvement upon our own. To guard against misunderstanding, I may state that he lives within thirty miles or so of Paris, and in a neighbourhood as cold and harsh as England during the winter and spring months, or more so. In the same neighbourhood I saw the leaves of *Magnolia grandiflora* turned as brown as dried tobacco by the frost at the end of last May, and the grower of the Peach in the same region takes about twice as much trouble to protect his trees from frost as we in England generally do. After giving some interesting statistics of the enormous quantities of fruit annually sent to the Paris markets, and stating that Beurré d'Amanlis had been selling for 2s. a-hundred, and Duchesse d'Angoulême for 4s. francs the hundred in August, in the small markets near, he proceeds:—

"It is a notable fact, that every Frenchman eats at least a bushel of fruit a-year, while it is as notable that two out of five English rarely see, much less taste, good fruit of any description. An Apple, Pear, bunch of Grapes, or a handful of Cherries, is eaten daily by every subject of Napoleon III. This 365 lots of fruit multiplied by the millions of population, necessarily gives a total prodigious in itself, apart from the immense quan-

tity sent abroad to England, Denmark, Russia, Sweden, and other colder climates. It is quite as childish to compare the two countries in fruit growing, as it would be to compare the two in the production of coal. Many of my men make as much as 400 francs a-year from their little gardens of fruit, after supplying their own family. This is clear profit, and costs them nothing but labour—Sunday work. England imports, but never exports fruit, excepting a few choice Grapes, while France exports but never imports. After living seven years in France, in a district quite near to Paris and by no means so favourable to fruit culture as many other parts that I could name, I have come to the conclusion that in this district fruit culture is better understood by the people in it than in any district in Britain. I leave individual gardens out of the question. No country can boast of private gardens like Great Britain; but for peoples' gardens, or the great fruit-producing gardens, I give the palm to France. I cannot speak of other countries. Why, go where you will in France, you see pyramid Pear trees even in the most unlikely nooks, around poor little houses. Every Frenchman loves a fruit tree, and will have it, too, let him live where he may. If in a town, he will still persist in growing his fruit tree, even in a tub or other vessel. This practice is quite common in quaint old towns, and probably it was this fashion that first suggested the idea of an orchard-house. Grafting on the Quince stock has been practised in France for two hundred years. This fact proves that the French have been fully alive to the question of Pear production and culture for a much longer period than the English, or than is generally supposed."

This sufficiently proves the inferiority spoken of. The fact that we have great numbers of well-managed noblemen's and gentlemen's gardens all over the country, seems to make but a very slight difference. We have yet much work to do in this way before we equal the French as Pear-producers; and I am really astonished, as everybody must be who has read Mr. Rivers's praises of the French cultivators, that he should attack me for contributing my mite towards the improvement of our fruit cultivation. How often has he held up Jean Crapaud as a bugbear to frighten English growers into good habits, and talked of his making his way in the London markets owing to the cultivators of Kent and other parts of England being "fruit growers," but not "fruit cultivators!"

4. He praises English gardening. I never said a word to the contrary, and stated its general superiority in the very paper which drew from Mr. Rivers the article of the 12th of September. Were I to write down the subjects which English gardeners do better than French ones, I should produce a very long list; but the reader will probably agree with me, that to discover any superior mode of culture pursued in France and inform English horticulturists of it, was more appropriate work for one studying the horticulture of that country than praising English gardeners.

As this style of argument is rather common with Mr. Rivers, and as he has since several times charged me both publicly and privately with "disparaging" English gardeners, the following quotation from Whately is, I think, calculated to have a good effect upon him. I feel that a quotation from "Easy Lessons on Reasoning" would be more appropriate, but have not my books at hand. "Yet it is very common to find persons, either out of ignorance and infirmity, or out of malice and obstinacy, joining issue on the question whether this or that ever took place, and representing the whole controversy as turning on the literal truth of something that had never been affirmed." The qualities of English gardeners are beside the question. To praise them is "needless excess;" but as some of the best and ablest of men have testified to the benefit they have derived from not being above taking a lesson from the humblest and poorest individuals, it would be anything but complimentary to the British gardener if we supposed him to be above adopting a sensible mode of culture from even such a despised class as the French gardeners are at present in Mr. Rivers's eyes.

5. The "LONDON MARKET GARDENER" thought the best part of French Asparagus about as good as "oozeweet." Mr. Rivers must think its flavour better than the English, for he says it is "owing to the brighter sun of France." Both are wrong. French Asparagus cut in the same state and size as British does not differ from it in flavour in any perceptible degree. The excellence of the French in this respect is owing to their growing the plant on a more rational principle than is common with us, growing it generally much larger, and making it a product which almost every dweller in a large town may enjoy for many weeks in spring—not as with us, where its use is

confined to the comparatively well-to-do. Even owing to the past dear Exposition season, Asparagus, good and fresh, formed one of half a dozen dishes in some restaurants, where dinners were served for a couple of shillings, including wine. It is true that in the superior restaurants, where the very large Asparagus with the long white stalks is served, you must pay a franc or a franc and a half for a dish of it alone. This mode of cutting, however, is bad, as we all know; but it is very easy to avoid that when it is so desired. That has nothing to do with the culture of the "grass." Fashion has that particular point under dominion, and as the growers wish to sell her Asparagus they must bring it as she desires.

6. Mr. Rivers says our English method of growing salads is far superior, and goes on to say that he derives all his salads from cheap unheated houses, &c. Now to anybody who has really had and taken an opportunity of knowing how well the French grow all kinds of salad, this assertion of his must furnish much amusement. Our production and cultivation of winter salading is utterly contemptible compared to that of the French. They talk very little about their "superiority," but they take particular care, after furnishing their own markets with an abundance of the best salad ever grown, to supply the enormous demand of London and many other large cities in winter and spring. It may be said that their climate has all to do with this; but it is not so. Anybody can grow such things in the open air—the greater portion of that sent to our markets is grown under bell-glasses in northern and north-central France, an immense quantity of it near Paris. Any gardener who knows the two countries well will admit that there are many places within fifty miles of London where salads might be equally well-grown. I cannot now enter into details, but I can assure your readers that a well-managed salad-producing garden in the neighbourhood of Paris is, all the year round, one of the most instructive and even beautiful examples of cultivation anywhere to be found. I will spare Mr. Rivers a comparison of its aspect with what I saw of his "choice salads;" but having had a good many useful hints from the very civil and hardworking French gardeners, I promise to inform them generally of Mr. Rivers's "superior" mode of growing winter salads. However, I must, if I wish not to preach vain things, wait till the adoption of his method shall have enabled English gardeners to supply their own markets, and keep in the country the vast sum of money which now goes into French pockets for winter salading in this country. I fear I shall have to wait a long time.

7. I had spoken of the admirable way the French grow the Peach at Montreuil, and the "LONDON MARKET GARDENER" attributed their success to other things than the patient and special skill and care they bestow upon it. I replied, "A LONDON MARKET GARDENER" attributes the success of the Peaches at Montreuil to gypsum and 'the power of the climate.' In Lord Charlemont's garden, on the shores of Dublin Bay, where there is no gypsum, and less sun than in Kent, I have seen as good Peaches as ever grew at Montreuil; but, notwithstanding this, it is rarely that you see the Peach in fine condition in the open air with us. He says the system of training makes no difference whatever. Certainly there are several shapes and systems equally good, but the unfortunate fact remains that the Peach is frequently seen, even in first-class gardens in England, straggling with a few shoots over a nearly bare wall, and the mere ghost of what it ought to be, while the walls of the good cultivators at Montreuil are covered with fresh green and healthy shoots from top to bottom, and the trees are pictures of health and fertility. The fact is the French make a speciality of its culture, know, and thoroughly attend to its wants at all seasons, and therefore succeed. That an equally good result could be produced in many parts not far removed from London, I have no doubt whatever, and shall some day try the experiment. Its special culture around two or three villages within easy reach of Paris causes that city to be flooded with its fruit every year (in good seasons, I am told, they are as cheap as Apples), and I do not see why London should be so much worse off for this most delicious and refreshing of all the fruits that grow with us in the open air."

Now, perhaps this may have been a little too pronounced, but I was replying to one who but for his professed calling I should have deemed unworthy of reply, so thoroughly emphatic was he in his ignorance. However, the fact is that the Peach as a wall tree is comparatively neglected with us to what it ought to be. I am not stating my own opinion here, but that of good cultivators of the Peach—Mr. Thompson, the veteran fruit grower of Chiswick, and author of our best recent

great work upon gardening, and Mr. Barron, the present Superintendent of the Chiswick Gardens. They both know well that in ordinarily favoured parts there is no wall fruit that will repay attention more surely; that the cultivators that have supplied Paris so well for ages take more care to protect their trees from frost and attend to them in every way than we do; and that by a like amount of attention we may supply the London market quite as cheaply as the French do theirs.

Mr. Rivers wound up his article with the following paragraph:—"This," alluding to my statement, "as I well know, is quite contrary to facts, for in our first-class gardens they are as one hundred to ten of the same class in France; the Peach and Nectarine trees trained to walls are models of beauty, perfect training, and fruitfulness. We must, therefore, conclude that the person in Paris who writes so fluently in the *Time*, knows but very little either about English gardens, English gardeners, or fruit-tree culture." He had previously stated that he did not dispute my "facts," and solely founded his mild and generous conclusion on my statement of the condition of the Peach upon open walls in this country.

I will now cut out a slip from the last edition of his "Miniature Fruit Garden," in which he very clearly gives his opinion on exactly the same subject—"A wall covered with healthy Peach or Nectarine trees of a good ripe age is rarely to be seen; failing crops and blighted trees are the rule, healthy and fertile trees the exception." I will in charity write down no conclusion from the foregoing, and here bid good-bye to Mr. Thomas Rivers.—THE WRITER OF THE ARTICLE ON HORTICULTURE IN THE TIMES.

GAULTHERIA SHALLOON.

CAN you inform me if the berry of the Gaultheria Shalloon is of any use as a preserve, or otherwise? My employer has been informed that it is largely used in the London hospitals in making cooling drinks for fever patients, if so, could you describe how it is prepared?

We have growing on the lawn a very fine clump of the Gaultheria, which forms a very pleasing object in July, with its thick clusters of white bell-shaped flowers, and then, again, in October, with its dark purple berries shining underneath its glossy green leaves. Altogether it is a plant that deserves to be more generally cultivated, even as an ornamental shrub. If its fruit possesses medicinal, or other valuable properties, its worth will be very much enhanced.—BLAND G. SINCLAIR, Gardener to R. Alison, Esq., Woolton Hayes.

[The berries of this species are much relished by the North American Indians, but we have never heard of their being employed medicinally. The leaves of Gaultheria procumbens make an excellent beverage known in North America as "Mountain Tea," and the fruit is used to give a pleasant flavour to medicinal mixtures, and other preparations. An oil, highly aromatic, is also obtained from the fruit, and used as an antispasmodic and diuretic, but if taken in quantity it has caused death, by inducing inflammation of the stomach.]

FRENCH PEACHES.

The writer of the article on French gardening (page 383), speaks of Paris Peaches of prime quality, late in the season, at two francs the basket of eight. In 1862, I passed the latter half of September in Paris. The weather was remarkably warm and sunny. The restaurateur's windows displayed magnificent specimens of Bellegarde, deeply coloured on one side, but green, very green, on the other. I continually went to the market to purchase Peaches, but was never able to get a single ripe one. So we need not envy the Parisians their sour Peaches in September. In former years I have tasted ripe ones in the streets in August, but nothing remarkable as to quality. No, give me a Noblesse from a sunny English wall.—G. S.

DUTCH BULBS.—The Dutch have long been celebrated for their cultivation of bulbous roots, especially Tulips and Hyacinths, and from March till June the district around Haarlem is carpeted with a succession of beautiful flowers, beginning with Crocuses and ending with Ranunculi. The sandy soil of the district, which is derived from the dunes, is highly favourable to bulb culture—indeed, some of the flowers grow on the sand hill, and hundreds of acres of valuable land are, in consequence, devoted to flower farming. In the proper season, as

one drives along the roads in the neighbourhood of Haarlem, he is surrounded on all sides by plantations of Hyacinths and Tulips in full bloom, forming a mass of colour, exceedingly varied and rich, while the scent exhaled is most delicious. Every house and villa has its bulb garden, and for long distances the eye can feast on glorious masses of richly-hued flowers. In one of the *bloemestries* there is a bed of Tulips, 200 yards in length, which, in the spring-time, is resplendent with gorgeous colour; and, in order to the better setting of them off, they are framed in a border of Crown-Imperial Lilies, and bridged over for effect every here and there with a wooden arch. It is a great pity that such a lovely flower as the Tulip is scentless; Nature must have exhausted herself in the colouring. The Hyacinth, however, exhales a delicate perfume, especially about midnight, and at Haarlem great beds of these favourite flowers, covered over with roofs of canvas to protect them from extreme heat or rain, may be seen so arranged as to present the most vivid contrasts, or exhibit the finest harmonies of colour.—(Once a Week.)

ROYAL HORTICULTURAL SOCIETY.

DECEMBER 3RD.

FRUIT COMMITTEE.—G. F. Wilson, Esq., F.R.S., in the chair. Mr. Cox, of Redleaf, exhibited a dish of very large and handsome fruit of Hoary Morning Apple. Mr. Sidney Ford, St. Leonards Lodge, Horsham, sent specimens of the fruit of *Physalis alkekengi*, which a member stated he knew had been used as a successful cure for gout, by two or three of the berries being eaten every day, or every other day. Mr. William Paul, of Waltham Cross, sent a seedling Apple, of conical shape, rich yellow ground, coloured on one side with broken streaks of crimson; the flesh is tender, and the flavour good, but the fruit was past its season. Mr. Brister, market gardener, Whiston, near Hounslow, sent a seedling Apple, for culinary purposes, which is stated to keep till May. It was considered a very valuable Apple for market purposes, and he was requested to send it again in April or May, so that the Committee may form an opinion as to its keeping properties. Mr. Tillery, of Welbeck, sent samples of Mill Hill Hamburgh, Welbeck Tripoli, and Frankenthal, to compare the flavour of the three, the berries of the last being reddish and not black, and the preference was given to Frankenthal. Mr. Tillery also sent a berry of a seedling Grape of extraordinary size and shape, raised from the Black Hamburgh crossed by pollen of Gros Guillaume. It was jet black and the shape of a Tomato. The flesh was firmer than that of the Black Hamburgh, having more of the character of Gros Guillaume, but with the flavour of the Black Hamburgh. Mr. Sidney Ford, of St. Leonards Lodge, Horsham, had a special certificate awarded him for a very fine collection of Pears, the specimens of which were large, finely grown, and excellent in flavour. It consisted of Glou Morceau, Josephine de Malines, Triomphe de Jodoigne, Broompark, Forelle, and Easter Beurre. Another special certificate was given to Mr. Ford for a large collection of Apples, consisting of twenty-three dishes of fine-grown fruit. Messrs. Lane & Son, of Berhamstead, had a special certificate awarded them for their collection of Grapes, consisting of Muscat Hamburgh, Alicante, Chaouch, Gros Guillaume (called Black Barbarossa), and Black Prince. The bunches were large, handsome, and attracted much admiration. A certificate was also awarded to a Black Alicante in a pot, which carried eleven large bunches. Mr. Ingram, of Frogmore, sent a splendid specimen of the Smooth-leaved Cayenne Pine, weighing 3½ lbs. It was awarded a special certificate. Mr. Rivers sent specimens of Apple trees grafted on French Paradise and Doucin stocks, showing that the scion grafted on the former, when covered with the soil, emits roots, which ultimately become the sustaining medium of the tree, and the stock itself becomes useless. Mr. W. Paul exhibited specimens of the Doucin and the Paradise stock. Mr. Sidney Ford sent a collection of twenty varieties of Potatoes.

FLORAL COMMITTEE.—As might be expected, from the severe weather, very few plants made their appearance. Messrs. Smith, Dalwich, again sent a collection of their Variegated Zonal Pelargoniums, with beautifully bright and highly-coloured foliage, proving the advantage of these plants for winter decoration. Mr. J. Jennings, Shipston-on-Stour, sent a few plants of *Cupressus macrocarpa variegata*, very ornamental, but, like *C. macrocarpa*, not always hardy. Mr. Green, gardener to W. W. Saunders, Esq., exhibited a beautiful variety of *Odontoglossum Alexandræ*, to be named Bowmanni, being one of the plants sent home by Mr. Bowman. The flowers were beautifully marked with rosy purple spots. A first-class certificate was awarded it. *Billbergia* species, with crimson flowers and leaves spotted with white, also came from the same exhibitor.

Messrs. E. G. Henderson sent blooms of a Chrysanthemum, a sport from Princess of Wales, a beautifully formed white flower, in which the florets are recurved; it received a first-class certificate. A collection of fine cat specimens also came from the same firm; among them were some remarkably fine flowers of Lady Margaret, a pure white Anemone-flowered variety. A special certificate was awarded for the collection. Mr. Cannell again sent his Variegated Ivy-leaved Pelargonium Duke of Edinburgh; this promises to be a useful plant,

and when seen in proper season will prove its good qualities. Mr. F. R. Kinghorn sent specimens of a Thuja, the name of which seemed to be undecided; it was requested that they might be sent again for comparison with others; likewise *Juniperus japonica* (?); this it was also thought necessary to see again. Mr. G. Smith, Hornsey Road, brought a basket of nice young plants of his white Variegated Pelargonium Princess Alexandra. A first-class certificate was awarded this plant at Chiswick, where it was planted out; the young plants maintain the good character then given to the variety. Mr. R. Parker exhibited a cut specimen of a Scutellaria, from Costa Rica, a very beautiful scarlet flower with a yellow lip. This is an old plant, but not often seen. As a winter plant it is most useful, and should be more grown. Mr. Parker stated that it was grown in a house with his Pelargoniums, thus proving it to be a greenhouse plant. This specimen was very much admired. Mr. Muir, gardener to Sir P. Egerton, Bart., Oulton Park, sent two cut flowers of a seedling *Amaryllis*, called Viceroy, a very fine variety of *A. sulcata*.

Mr. George, Stamford Hill, sent a collection of cut Chrysanthemums, containing some fine specimens; a special certificate was awarded. Mr. Forsyth, Stoke Newington, also received a special certificate for a fine collection of the same.

Mr. Salter again sent his *Beta chilensis*, remarkable for its deep-coloured leaves, *Galactites tomentosa*, and *Centaurea magnifica*, the last with too loose and coarse a habit to make it a decorative plant. Mr. Salter also sent several specimens of his seedling Japanese Chrysanthemums, which seem as much to astonish as please those who saw them. They were, however, so appreciated by the Floral Committee, that four of them—namely, Red Dragon, Anranium, Comet, and Wizard, were awarded first-class certificates. The flowers are most curious, and the plants when under good cultivation will prove most useful for decorative purposes in the conservatory. The singular form and outline of the flowers will make an excellent contrast with those flowers with broader florets which are now so much used. They are later-flowering than the garden varieties, which will make them very desirable. Every shade of colour that the Chrysanthemum assumes seems to be represented in these Japanese seedlings, which were raised from *Chrysanthemum roseum punctatum*.

GENERAL MEETING.—Sir Philip De Malpas Grey Egerton, Bart., M.P., in the chair. After the usual announcement of awards the Chairman remarked, that as this was the last Meeting for the present year, he thought he might congratulate the members on the success of the Tuesday meetings, which, indeed, he looked upon as the life-blood of the Society. He, therefore, begged to propose a vote of thanks to the Fruit and Floral Committees. This, as well as a vote of thanks to the Chairman, having been carried unanimously, the proceedings terminated.

ENTOMOLOGICAL SOCIETY'S MEETING.

THE second meeting of this Society for the present season was held on the 18th ult. at Burlington House, Professor Westwood, V.P., in the chair.

Mr. F. Bond exhibited a series of specimens of *Sterrhia sacaria*, a Moth belonging to the family Geometridæ, which had been reared from the egg state by Mr. Rogers, of Freshwater in the Isle of Wight. Two females had been taken in the month of August, and had deposited the eggs from which the specimens had been reared. The caterpillars fed upon *Polygonum aviculare*, and the periods of the various stages of development agreed with those of the series of the same species previously reared by Mr. MacLachlan; but the Moths now exhibited were quite unlike the parent insects, which were pale yellowish buff, whereas the offspring were of a dark colour without any of the rich tints of the ordinary specimens. Mr. Bond could only attribute this result to the great want of sunshine during the past autumn.

Mr. Higgins exhibited a splendid collection of specimens of Butterflies from Borneo and Labuan, several of which had hitherto been unique in the collections formed by Mr. Wallace. Amongst them were the magnificent *Papilio Brookianus* and the remarkable *Nymphalis Caledonia* of Hewitson, now proved by the occurrence of perfect individuals to belong to the genus *Prothoe*, as determined by Mr. Butler of the British Museum.

Mr. Stainton exhibited a specimen of the rare *Ehulea catalanalis*, captured at Cheshunt in September last by Mr. Boyd. Its peculiar mode of flight, like a fly hovering over a flower-bud, had caused attention to be devoted to it. Mr. Trimen exhibited a small species of Locust belonging to the genus *Pæcilocerus*, of the pupæ of which he had found hundreds of pairs together at Natal in the early part of the present year. Also a new species of Mantis, nearly resembling one of the Phasmidae, with minute and scarcely raptorial fore legs; likewise an apparently new species of *Papilio* from Paraguay resembling *P. Machaon*, but with the spots of the central band tinted with red brown on the outer side. Mr. MacLachlan mentioned the occurrence of *Boreus hyemalis* in moss at Wickham and near Croydon.

The Chairman gave an account of the Chinese manufacture of the silk gut used by anglers, of which he had received details from Dr. Hooker, together with specimens of the cocoon and chrysalis, proving the insect to belong to an undescribed species of *Saturnia*, the caterpillar of which feeds on *Liquidamber*. About twenty-four hours before the time for commencing spinning the cocoon the insect is

placed in vinegar, and the silk reservoir of the caterpillar is drawn out, and stretched sometimes to the length of 20 feet.

Mr. Stainton mentioned a new habitat of the larva of a species of *Tinea* in South Africa—namely in the horns of a koodoo from Natal; and Mr. Trimen stated that he had seen the skull of a Hartbeest, the bone of which was eaten into by what he took for the larva of a *Tinea*. Mr. MacLachlan gave an account of some observations of Signor Balbiani on the destruction of the larvæ of the Clothes Moth by powdering muscadine over woollen infested by that insect.

NOTES AND GLEANINGS.

NEGOTIATIONS are proceeding for holding next year the Royal Horticultural Society's Country exhibition at Leicester. The proceedings will be the same as at Bury St. Edmunds, and we hope that the prize lists and results will prove as successful as they were there. We learn that the guarantee fund has been already secured.

—THE King of Prussia has conferred the Order of the Crown of Prussia on M. BARILLET, who has, for the most part, arranged the public gardens recently formed in Paris.

—MESSRS. VEITCH & SONS have received official information that they have gained the "grand prix," or large gold medal, at the Paris International Horticultural Exhibition—a good evidence that British horticulture can bear comparison with foreign, even when the competition is so far off from our shores. We also understand that MESSRS. SHANKS & SONS, of Arbroath, have taken the only medal awarded for lawn-mowers; whilst to MESSRS. CARTER & Co., of High Holborn, has been given a silver medal for the lawn Grass seeds which they exhibited.

—THE increase of the demand for Asparagus in France, may be estimated from the fact, that the money received for it at Argenteuil in 1820, was 5000 francs; in 1840, 20,000 francs, and in 1867, 400,000 francs.

—ANOTHER distinguished gardener has gone from among us Mr. McNEILL, head gardener at the Secretary's Gardens, Phoenix Park, Dublin, died on the 26th of November. The *Irish Farmers' Gazette* says—"In him gardening has lost one of its most single-minded, enthusiastically devoted, and successful followers; the community a man of sterling worth; and the Chief Secretary and public service an attached and faithful servant. By reason of his great ability as a plant grower, as well as of his skill in the other branches of his profession, his name was a household word among horticulturists; and repeatedly have our columns, and those of the horticultural press of England and Scotland, borne testimony to his extraordinary merits as a cultivator. To know him was to be his friend; and we have no doubt the intelligence of his early demise will be read with sorrow by many, and elicit heartfelt sympathy for his devoted wife and helpless little ones."

WORK FOR THE WEEK.

KITCHEN GARDEN.

It is admitted by most practical men that nothing is more conducive to success, whether in agriculture or horticulture, than a judicious rotation of crops; for different plants require different proportions of food, and, consequently, what is rejected by one will be appropriated by another. As for the circumstance that a given crop may be produced on the same plot of ground for several years in succession, it is not, as would at first sight appear, antagonistic to the above doctrine, inasmuch as the plants with which such a result generally takes place are somewhat indifferent as to the texture of the soil, provided their favourite manure is afforded them. At this period, those who are desirous of laying the foundation for a good garden in the ensuing year should closely review the routine of cropping for the past summer, and even that of the preceding year. Various are the schemes or rotations practised by different gardeners, many of them being based on no better foundation than the convenience of the hour. When, however, the kitchen garden is sufficiently extensive, and where much produce is required, the rotation of crops should be carefully studied. The great difficulty is to procure fresh ground for the Cabbage tribe, so numerous are the kinds as well as successions in cultivation. Broken-up plantations of Strawberries, Raspberries, and bush fruit trees, with Celery ground, should at all times, as a rule, be set apart for some of the Brassica family. The ground from which Celery has been taken, especially in the Scotch or bed fashion, is also really

made ground for new Asparagus-beds. Potatoes, prepare well for almost any crop. Deep or tap-rooted crops should be succeeded by others with shallow or fibrous roots. Carrots and Onions in rich kitchen gardens will be found much safer if grown on high-raised beds without any manure. *Asparagus*, cover the roots with a good coat of manure. Hard frosts frequently do serious injury to the roots when this protection is not afforded. The *Celery* ground, as before observed, will answer well for a new plantation. It should be ridged to mellow as the crop is taken up. The best policy with *Lettuces* intended for the supply of next spring, is to allow them to freeze tolerably firm before covering them up. A very light screen of straw should be shaken over them at first, and when this is frozen add a little more, the object being to keep them frozen as long as possible. Above all, do not uncover them when a thaw arrives, let them remain until completely thawed. These remarks will bear equally on all other vegetables of a tender character.

FRUIT GARDEN.

With regard to very young Pear trees, the object of pruning should be to encourage the growth of wood in proper directions, rather than the production of a few fruits at the expense of retarding that development of the tree. The form in which the tree is to be trained must be first decided upon. For walls and espaliers, the horizontal disposition of the branches is the best; if the tree be a maiden plant it must be headed back to three buds—to the two best situated for producing a horizontal branch on each side, whilst the third or uppermost is trained upright. If the tree is a year older, and has been treated as above in the former season, the upright is to be cut 1 foot, or four courses of brick, higher than it was formerly. Sometimes a little deviation will be necessary on account of the buds, but generally the upright should be cut immediately above that bud which is nearest the line of brickwork along which it is desirable the horizontals should be trained. The buds to produce the latter will, of course, be situated below that line; it is proper they should be so in order that the shoots may grow diverging upwards a little way before they take a strictly horizontal direction. These instructions with regard to the management of the upright leading shoot are applicable every year till it is finally stopped on reaching the top of the wall or espalier. If the horizontal shoots are weak, it will be advisable to shorten them about one-third. The pruning of older trees on which fruit-spurs are formed, must be deferred till next week; in the meantime the fruit-buds on such will become farther developed and easier to distinguish.

FLOWER GARDEN.

Look carefully over rock plants and protect the roots of such as are tender. Divide and transplant any that are spreading too much. In favourable weather when the walks are dry manure may be wheeled on borders to be dug in during winter as opportunity offers. Land that is naturally very stiff should receive a coat of sand or lime rubbish to lighten it, but by no means disturb the soil unless it is dry and in a fit state for digging. Cabbage and Provence Roses might now be pruned if the weather continues mild, but Chinese and other tender kinds should be left till winter is over.

CONSERVATORY AND GREENHOUSE.

The Camellias will now be making a fine display in the conservatory. They should receive careful attention as to watering with very weak, tepid, liquid manure. Let them not, however, receive a drop until they are really dry, and then supply it liberally. If in such cases any air-bubbles arise, continue to fill up with water until they cease. Never allow the fine foliage of Camellias and Oranges to become dirty, for the beauty of the conservatory depends quite as much on them as on mere floral decoration. Let not a drop of water be spilled on the conservatory floor at this period, and keep on a very little back air at night in order to let atmospheric humidity pass off. Be very cautious in the use of fire heat; the less the better if a temperature of 45° to 50° can be insured. See that the early-flowering Cinerarias have the lightest place in the house close to the glass; crowding is very prejudicial to this plant. Let plants of *Eranthemum pulchellum* coming into bloom have abundance of water and a warm situation. The *Veltheimias*, *Tritonias*, *Stenorhynchus speciosus*, *Lachenalias*, &c., are delightful winter plants; see that they receive due attention. All decaying flowers should be removed every day.

FORCING MT.

Take care that the pots are not plunged deeply if there is a lively bottom heat; such in the neighbourhood of the roots

should not exceed 75°. Indeed, if the atmospheric heat of 60° or 65° can be secured by other means, a bottom heat of 70° would suffice.

STOVE.

No plants are more benefited by rest than Orchids. A drier atmosphere and lower temperature are now desirable, but then our collections are from countries with different seasons of growth and various kinds of temperature and climate, and hence it is extremely difficult to cultivate in one house a miscellaneous collection of Orchids so satisfactorily as when there are two divisions, the one commanding a higher temperature, with more moisture, than the other. Where these do not exist advantage must be taken of other houses, such, for example, as a forcing pit; many of them in a growing state can be removed thither to great advantage, and thus their growth may be promoted without injury to the general collection.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

Such fine weather as we have had in November is almost unparalleled, and it afforded a good opportunity for forwarding work out of doors; but we could not do so much in this department as we wished. Most gardeners know what it is to find every department requiring particular attention, when that can only be given to one at a time. The frosty mornings of the past week afforded a good opportunity for wheeling manure, soils, &c., and the dry days were occupied in protecting the roots of Globe Artichokes, and packing some long litter among beds of *Celery*, to help to throw wet aside, and to protect from frost. A few little heaps placed at the sides will be ready to shake lightly over the tops, if the frost become very severe, and the covering will be removed when the thaw comes. This is a very simple but effectual mode. Of course, if some sort of a waterproof roof could be placed over the bed at this time, to throw all the water off, it would be very desirable. We used protection for Cauliflowers, Lettuces, and Endive, in the coldest nights, and now have the litter in heaps. The drier the litter, the better it acts, and the more pleasant it is to work amongst. From having at one time a very limited supply, we used to forecast for this stable litter, by shaking it well, and taking out all the droppings, drying it on a hot day, and stacking it in summer. We would prefer clean straw now for such protective purposes, and even Fern, &c., but the litter answers well, and straw has been expensive for a year or two. It is very comfortable to have a stack to go to in an emergency. Rough hay taken from outlying parts of the lawn, but unfit for cattle use, owing to the leaves of trees, shrubs, &c., is also first-rate for this purpose.

All such protecting material is most valuable when it is dry—a simple fact that men are apt to forget, especially when it is used over glass. Any one could see a change was coming on Saturday morning, when most likely for a time there would be no need of such material. This, therefore, was all removed from Cauliflowers, Endive, bedding plants, &c., early, before any rain could wet it, and piled up in little heaps. When much in use, over frames and hurdles, nothing is better for taking it off quickly than the back of a wooden rake; but in doing this there is a great disposition in the workman to bring it down to the front and leave it there, a matter of little moment in fine, dry weather, but of much importance in changeable wet weather, as the wet that runs down from the glass, hurdles, &c., soon soaks it; hence it should be moved in such weather to a little distance from the front, and placed in heaps to throw wet aside.

The last day of the month on which we are writing this, has brought a change which will be agreeable to many in this neighbourhood. The rain towards the evening came down in earnest. As a general rule, those who depended chiefly on large tanks in this neighbourhood, were badly off for water. Most of the tanks have been empty for weeks, and water carts were as busy after water as we have seen them in July. Now tanks and pools will receive a supply.

Tainted Water.—We have a large cement tank open to the atmosphere. It receives the rain water from glass-houses, shades, &c. It is now half full, and contains some hundreds of barrels, which we would be sorry to lose. The water is freely covered with Duckweed, which ought to do something to purify it. There can be nothing in it but a few leaves that may have blown in; it is clear and pellucid, but the smell is such as to render it unfit for washing vegetables. We do not think it

will injure anything, so far as watering goes, but we are doubtful of using it from the syringe over plants at all tender, and that tank was the chief place we depended on for pure rain water. Generally about midsummer we could clean the tank out every year, though there was nothing in it but a little mud from decomposed tree leaves. Perhaps more frogs found their way into it this year than usual, and the worst of it is, that when they get in they never get out, and their remains would have some effect. To make sure of good soft water we should not like to cover the tank over. There can be little other impurity than what comes from the smoke that lodges on glass, and the Moss and Lichens with which some slates are encrusted. We shall be sorry to empty this large tank, and yet we fear that otherwise it will become a nuisance, and may be hurtful as well as unpleasant to the men. Can anything be done to remove the scent, and that will not injure it for plant watering?

Wire Netting.—"DONE FOR" and "GREATLY VEXED" have written to us, complaining that the cheap wide-meshed netting recommended by us and advertised at so low a figure in this Journal, had been of little use to them as a protection against rabbits, pheasants, &c. The first says—"I bent the netting in a semicircular shape over my rows of Peas, fastening it at the sides to the ground with pegs, but then the pheasants and partridges came in at the open ends and cleared out the seeds for me." Well, we said nothing about the convenience of open ends, that was something like shutting the doors and opening the windows. "GREATLY VEXED" tells us "That depending on our recommendation, he procured several webs of this galvanised netting, fastened it with hurdle-stakes inside a Thorn hedge, and that he is little the better of all his outlay, as the rabbits squeeze themselves through between the stakes; and where that is rather hard work for them, they scratch a tunnel beneath the wire and prey on his young Cabbages almost as much as they used to do." We think that we told how all this could be avoided, by pinning the netting firmly down to hard ground all the way, and, better still, sinking the netting in a little trench at least 2 or 3 inches beneath the surface. If we did not do this explicitly enough, we are much obliged to our correspondent for telling us of his failure, as if attended to, it need not be a failure in future. We sunk our netting about 2 inches beneath the surface, and thus avoided the necessity of pinning down with hooked sticks; but recently we found that some of our Cabbages were nibbled, and on closely searching the ground we found too many proofs that our little enemies had again found their way in. On examining our fence we found that in many places the ground had sunk so much as not only to leave the bottom of the netting on the surface, but in many places an inch or so above it. This was very tempting to the rabbits, which, seeing delicate feeding-ground before them, had nothing to do but to scoop out a small tunnel-entrance. Without troubling ourselves to sink the fence, we merely with a spade piled up from 2 to 3 inches of soil against it and trod it so as to be firm, and since then we have had no more of such visitors. As a general rule, pinning the netting however securely on the surface will not avail, as the rabbit will be tempted to make its burrow beneath, but in almost every case when it commences its burrow and comes against the hard wire beneath the surface, it gives up the attempt and considers an entrance impracticable. At least, with plenty of scratching up to the net, we have found no attempt to undermine deeper when the net is thus sunk beneath the surface 2 or 3 inches.

FRUIT GARDEN.

An accumulation of other work has prevented our proceeding with pruning, nailing, and cleaning out-of-door fruit trees, though never could there have been better weather for the purpose.

Strawberry plants in pots we protected from the frost, as against our wall they are still standing out of doors, and we never like the pots to be hard-frozen after this period. The roots are much more easily injured by frost in a pot than they would be in the ground, or even with the pot plunged. We hope soon to take a lot of them into our orchard-houses, but we would like to give them a rough washing first. A very little straw, however, will keep Strawberry plants in pots fully exposed safe from even a sharp frost, and soaking rains may be guarded against by laying the pots on their sides, and if the pots are placed in narrow beds the protection necessary is easily given and removed; but where practicable the plants always do best that have glass protection after the end of October. What with hedging plants, &c., we have not as yet a frame empty, but as soon as we can empty one we will give just

a little bottom heat, and fill with pots of Black Prince and Keens' Seedling to bring them on gently.

Dressed the spaces between the rows of *Strawberries* out of doors with rotten dung. A number of late runners, well rooted, we shall plant out some 6 or 8 inches apart, and then if we wish to do so we can fill a mild bed with the best of them, to bear a fortnight or three weeks before they do so out of doors. This makes us sure, if our stock in pots should become exhausted, as, after commencing to gather forced fruit, it is unpleasant to have a break, and these under glass with a little heat below them, will enable us to have fruit about as early as will come out of doors farther south.

Most of our other work in this department has been looking over Grapes, giving them plenty of air, and in dull weather a brisk fire during the day, and affording a little air at top all night. Very few damped berries have as yet troubled us. Looked over the fruit-room, and have been so far disappointed in Pears, that they do not keep so well as they used to do. There seemed with many scarcely a gradation from the seemingly hard state, when they would try the best teeth, and their quickly rotting as they were fit for use. The damp, drizzling autumn might have had something to do with it, but one would imagine that would affect Apples likewise, which are keeping very sound and well.

We have said so much on planting, &c., that we must refer to previous numbers, but would still say it is better to plant now than to defer it to the spring, as the ground is but little cooled as yet.

ORNAMENTAL DEPARTMENT.

The frost last week has rendered the remains of the flower garden rather shabby, though such plants as *Salvia fulgens* are looking well, a row being still a hedge of bright scarlet. Small neat plants of this would do very well for cool rooms in winter. As cut flowers, we never knew anything that faded sooner, especially in hot rooms. We thought at first the stems had been carelessly cut, but when we cut them carefully close to the joint, so as to avoid the hollow stalk resting in the damp sand, it was all the same, the leaves shrivelled, and the flowers dropped in a very short time. But for this, this hardy fine *Salvia* would be of great utility in forming pyramids of cut flowers.

We shall clear off the remains of the flower garden as soon as convenient, though even now it is far from disagreeable, except where we have mutilated the beds to take plants from them that we thought we might need, and need more likely than those who can take large cuttings early either from a reserve garden, or from their dressed beds, owing to their employers leaving early in the autumn. Here we never take cuttings so early, nor yet so large in size, as we would desire, because we wish to keep the beds in fine condition as long as possible. Our cuttings of *Scarlet Pelargoniums* are, therefore, smaller than usual, and so they are also required to stand in little room all the winter in their cutting-boxes. Could we take large early cuttings we should never trouble ourselves with taking up old plants.

The old plants are chiefly valuable to those who cannot give enough of light and good growing treatment to young ones all the winter. As frequently stated, the old plants pruned in as incidentally alluded to last week, and put in close together, may be kept in any place where they will be rather dry, and free from frost; and from plants so kept, and that did not show a leaf all the winter, we have taken a score of fine plants just breaking their deer antler-like shoots in March, and if these could have fair treatment then as to light and in other respects, they would beat the best young plants struck in autumn. By such means our cottager friends may keep a score or two of plants in little room and with little trouble all the winter.

In relation to this subject, a correspondent tells us he succeeds best by taking up the plants early, potting them singly, setting them in a shady place, watering, and syringing the leaves in warm days, and thus treated the plants scarcely lose a leaf, and look well all the winter. We know he is quite right, but then such plants require room all the winter. Another correspondent says he is surprised we do not recommend bottom heat for such raised plants. We think we did for the tender kinds, to encourage making roots at once, and the same might be done with the scarlet bedding *Pelargoniums* when the owner would rather see them green all the winter instead of in a torpid state, like so many wooden faggots; but all that requires room and good treatment, whilst by removing every leaf, pruning in the head, cutting back the roots, and packing as many as possible, and as closely together as possible, in a

box or pot, the skeletons of the plants will be nearly independent of light and of much attention all the winter, and will require little more than security from frost.

In lifting some of our plants we noticed what might be useful to those who, instead of making skeletons, wished to make fine plants in winter and spring of the plants thus raised. Last season, from a scarcity of pots, we put in a great number of our autumn and spring-struck cuttings simply in pieces of turf, say 3 inches square, and after setting them under glass at first to grow at planting time, just turned them out, turf and all, the finer fibres peering out all round the turf. On taking these up every one might have been made into a fine specimen, as the roots in the autumn all hung round the central ball of turf, and when potted they scarcely felt the change. Want of room prevented us taking advantage of this mode. It was described last spring. The turf, about 2 inches thick, was cut in squares, a hole scooped out in the centre of the earth side, the roots placed in it with rich sandy loam, and the pieces then packed closely in a bed, where they generally remained until they were planted out.

Tulips, Hyacinths, and Crocuses at all forward will require to be protected from birds, mice, and even from severe frosts, and in such weather all the best Auriculas, Polyanthus, Carnations, and Picotees should be safe under glass. Auriculas should have scarcely any water until the spring; but all the air possible should be given in fine weather, and that is most securely done by tilting the glass sashes back and front, and only shutting down when frost is apprehended. If the frost is severe protect with mats or litter; but even then a little air should be afforded in the middle of the day, as the plants must not be excited by sun heat under glass in the winter months.

In the plant departments the chief work in mild weather has been to preserve a rather dry atmosphere, and as low a temperature as would be safe. Except for plants in bloom, and swelling their buds, the less water plants have, so long as they have enough, the better they will thrive. It is only in frosty weather, and when more firing is required, that we shall have to trouble ourselves about a humid atmosphere. In mild weather it is generally humid enough, except when we dry it with fire heat. In watering great care must be exercised not to spill a drop unnecessarily, as it will rise by evaporation, and be so apt to come back again in the form of drip. It is vexing to see a house watered with a rose, and walks and floor flooded with water, as might be the case with propriety in June and July. It is necessary to bring thought to bear on such a simple matter as watering. In this world of ours the men who combine thought with practice, and intelligence with every-day operations, are the men who will leave behind the unthinking, plodding workman, however good and excellent in other respects.—R. F.

COVENT GARDEN MARKET.—DECEMBER 4.

The rough weather of the last few days has interfered to a considerable extent, by diminishing the supplies. Prices, however, remain about the same, and business is steady without improvement.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	2	6	3	0	Melons each	2	0	3	0
Apricots doz.	0	0	0	0	Nectarines doz.	0	0	0	0
Cherries lb.	0	0	0	0	Oranges 100	5	0	10	0
Chestnuts bush.	8	0	14	0	Peaches doz.	0	0	0	0
Currants ½ sieve	0	0	0	0	Pears (dessert) . . doz.	2	0	4	0
Black doz.	0	0	0	0	Pine Apples lb.	4	0	6	0
Figs doz.	0	0	0	0	Plums ½ sieve	0	0	0	0
Hilberts lb.	1	0	0	0	Quinces doz.	2	0	3	0
Cobs lb.	1	0	0	0	Raspberries lb.	0	0	0	0
Gooseberries . . quart	0	0	0	0	Strawberries lb.	0	0	0	0
Grapes, Hothouse, lb.	2	6	5	0	Walnuts bush.	10	0	13	0
Lemons 100	6	0	12	0	do. per 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes doz.	0	0	10	0	Leeks bunch	0	3	10	0
Beans, Kidney 100	0	0	3	0	Lettuce per score	1	0	1	6
Beet, Red doz.	2	0	3	0	Mushrooms pottle	2	0	3	0
Broccoli bundle	0	6	1	6	Mixed & Cress, pannel	0	2	0	0
Brus. Sprouts ½ sieve	2	0	2	6	Onions per bushel	3	0	5	0
Cabbage doz.	1	0	1	6	Parsley per sieve	3	0	0	0
Capiscums 100	2	0	3	0	Parsnips doz.	0	9	1	6
Carrots doz.	0	6	0	8	Potatoes bushel	3	0	4	6
Cardiflowers doz.	3	0	6	0	Kidney do.	3	6	5	6
Celery bundle	1	0	1	6	Radishes doz. bunches	0	9	1	0
Cucumbers each	0	6	1	0	Rhinbarb bundle	0	0	0	0
pickling doz.	2	0	0	0	Savory doz.	6	9	1	0
Endive doz.	1	0	0	0	Sea-kale basket	0	0	3	6
Fennel bunch	0	3	0	0	Shallots lb.	6	8	0	0
Garlic lb.	0	8	0	0	Spinach bushel	2	0	3	6
Herbs bunch	0	8	0	0	Tomatoes per doz.	2	0	3	0
Horseradish . . bundle	2	6	4	0	Turnips bunch	0	4	0	0

TRADE CATALOGUES RECEIVED.

Smith & Simons, 1, Buchanan Street, Glasgow.—*Gladioli Catalogue*—*Rose Catalogue*.

TO CORRESPONDENTS.

.. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

Book (*Clericus*).—The volume on laying out gardens will appear very early next year. The delay is occasioned partly by the numerous illustrations.

FOWLER'S INSECTICIDE (*Hampole*).—See advertisement in last week's Journal.

FRUIT TREES IN POTS (*Z. O. P.*).—The information you need is in Pearson's "The Orchard House." You can have it free by post from our office if you enclose twenty postage stamps with your address. Peaches, Nectarines, Apricots, and Grapes would be most profitable.

HEAVIEST GOOSEBERRIES (*A Florist*).—Red: London, Wonderful, Conquering Hero, Duke of Sutherland. Yellow: Leveller, Criterion, Drill, Catherine. Green: Thumper, General, Telegraph, Stockwell. White: Snowdrift, King of Trumps, Antagonist, Careless.

HOGG'S EDGING TILES (*W. J. Rawling*).—We do not know who keeps a stock of them; but we know that they are to be had at potteries near London.

INTERMEDIATE STOCKS (*H. M. K.*).—The Stocks mentioned by Mr. D. Thomson, of Archerfield, in our number of November 21, can be procured of Mr. Methven, Leith Walk Nurseries, Edinburgh. (*A. S. A.*)—The foregoing affords the information you need. We cannot tell the name of the Balsam yielding the white pollen, the specimen sent was so imperfect.

PEARS FOR POT CULTURE, &c. (*An Amateur*).—Any Pear you prefer may be cultivated in a pot. A lead-lined tank will not render water injurious to plants.

PEAR TREES SEVERELY ATTACKED BY SCALE (*J. H.*).—The specimen sent is very bad, and the tree can do no good with its wood so encrusted. The simplest method of cure is to unnaul the trees now, do away with all shreds and ties, thoroughly wash the trees and wall with water a few degrees below the boiling point, and then paint the trees with fresh lime wash, also doing the same to the wall. If the lime wash is too glaring, tone it down with clay and soot. Or, you may scrub the tree and wall with warm water, then fresh lime the wall, and paint the tree with Gishurst, 8 ozs. to the gallon. See in a previous page about the ground viney.

BEADED BRICKS (*G. P. L.*).—These bricks can be built into a wall without disfiguring it, and facilitate training when tying is adopted. We have never seen any of the bricks so employed, so can give no opinion as to their efficiency, cost, or liability to injury. If we adopted the tying-in system of training we should use one or other of these nails. No. 1 is a common eyed wall-nail; No. 2 was called by its inventor, Mr. Hill, "The Permanent Tie Nail."

PLANTS FOR A NARROW WALL BORDER (*W. H. R.*).—We think Hepaticas would do fairly in the border you name. You may have clumps of them alternately with Snowdrops and Winter Aconites, at 18 inches apart. Hepaticas are of various shades of colour, as double blue and red, and single blue, white, red, pink, and purple. You may have the common Primrose (*Primula acaulis*) and its varieties, double lilac, crimson, sulphur, purple, and white; also Polyanthus, *Pulmonaria angustifolia*, *P. mollis*, and *P. officinalis*; *Trollius europaeus* and its variety *albus*, *T. napellifolius*, and *T. asiaticus*. Nothing would succeed so well as *Vinca major* elegantissima, *Vinca minor*, and its double variety.

CHRYSANTHEMUM LEAVES WITHERING (*F. H. L.*).—The only preventive that we know is to keep the shoots well pegged or tied, and to allow the plants light on all sides, not keeping them closely together, so as to deprive their leaves, and especially the lower ones, of light and air. If this is not attended to the leaves wither when the plants have a change of position and more air and light are afforded them. Allowing them to suffer from the want of water will also cause the same result, and the lowest leaves, being the oldest, are the first to show the effect of the drought. Afford them abundance of air, let no plant be too close to its neighbour, keep the shoots well tied out, and do not allow the leaves to flag.

RASPBERRY CANES, PLANTING (*A. K. H.*).—It is well to leave at their full length the canes now planted, and in March cut them down to within 1 foot of the ground. If you leave them a sufficient length for fruiting, and allow them to carry a crop of fruit the season after planting, or the first year, it is rarely that the suckers produced are so strong by the autumn following that of planting as they were when planted, whilst if cut down when planted or before they begin to grow, they throw up suckers that are capable of producing fruit in the following year.

MUSCAT HAMBURG VINE (J. M. K.).—We have no doubt you will succeed well with your Muscat Hamburg if you thin out freely the bunches that show so plentifully, so as to leave only one, and not always that, on the shoot that shows as many as four bunches, and when the bunches are in bloom keep a good heat—a little more than usual. Damp the path and floors of the house, and during a sunny day gently draw a dry hand over the bunches in bloom. Your having fine nine-leaf reds on your Bewood Muscat, so well ripened, is the chief reason why some of the small spurs do not ripen well.

SPAN-ROOFED VINERY (F. H.).—We quite approve of your inside border, but we would have an arch opposite each Vine, instead of every alternate Vine, in order to let the roots out. We approve of your filling up these arches in a temporary manner for the first year or two, removing the brickbats, &c., and letting the roots out afterwards, and making your outside border piece by piece at two or three times. The effect on the Vines will be like that of a fresh piece of pasture in the case of cattle. Your walk round the house inside, and your proposed archway for Vines in the centre—the Vines, like those at the sides, planted 4 feet apart, and so that the Vine in this bed shall face the interval between two Vines in front—will look very well; but we fear that unless you keep the side Vines very close to the stems the Vines will suffer from want of light when the former are fully established.

VINE CULTURE (Flora Montague).—The Vines ought not to be pruned until the leaves have fallen, and we should think it will be quite early enough to do this by Christmas or the new year, but the sooner it is done after the leaves are all fallen the better, as there is then less likelihood of bleeding. You may cut in all the shoots to two eyes; but if the shoots are farther apart on the rod than 15 inches, you may leave the shoot next below the length of rod on which there are no shoots somewhat longer, or cut it back to three or four eyes. The Vines, after pruning, may have the loose bark removed from the rod, and be painted with a composition of 4 ozs. of soft soap dissolved in half a gallon of water, and you may add an ounce of tobacco over which enough boiling water has been poured to cover it. The tobacco liquor upon cooling may be added, after straining, to the soap solution, to which add 1 lb. flowers of sulphur, and enough clay to bring it to the consistency of paint. The stems and every part of the Vines should be painted with the composition, rubbing it well into every crevice. The woodwork should be well washed with soap and water, taking care not to wet the glass with the soapy water, but wash it with clean water. The walls ought to be well whitewashed, adding 1 lb. of flowers of sulphur to every gallon of whitewash, and the house must in all respects be made thoroughly clean. The border may be neatly pointed over with a fork, avoiding going so deep as to disturb the roots, and you may sprinkle over it a few half-inch bones—one hundredweight will be enough—and put over them an inch or two of chopped turf and horse droppings in equal parts. No water will be required in winter, but in March you should give a good watering, and repeat it every three weeks until the Grapes change colour for ripening, when the last watering may be given. It is not necessary to have fires in winter, unless you have plants in the house, when fires may be employed to keep out frost. The temperature should not exceed 40° from fire heat. You cannot give too much air, if you only keep out rain, nor have the house too dry at this season. If you have no plants fire heat will hardly be necessary, except it be in very severe weather, when a gentle fire may be made, but not more than will raise the temperature to 40°, which ought not to be exceeded when the Vines are at rest. For further particulars we would advise you to obtain the "Garden Manual," which you can have free by post from our office for twenty postage stamps.

GRAPES SPOTTING AND CRACKING (A Grape Grower).—From your description we should attribute the turning black of the berries on the Lady Downe's Vine, and their subsequent falling-in, to spot. Spot is mainly attributable to depriving the Vines of too much foliage, and especially that immediately over the bunches. The Lady Downe's Grape will endure as heavy cropping as any other variety; but to grow it well it requires heat, and on that account the berries set badly. With a little heat, attention paid to admitting air early, and to not reducing the foliage too much at once, we think the Lady Downe's would have been different from what you represent. The Muscadine, too, would not have cracked had air been given early, and a little fire heat been used when the Grapes changed colour. A gentle fire, to cause a circulation of air in dull moist weather, would, doubtless, have saved their cracking; but fire heat without air is worse than having no heat. Giving air and avoiding to make the atmosphere more moist than can be helped are the essentials in a vinery when the Grapes are ripening. Your having them due from Vines in pots, in heat, tends to confirm our views.

COLOUR OF ROSES (W. H. B.).—The Roses you name are all good, and we have stated their colours. Gloire de Dijon, yellow and salmon; Général Jacqueminot, crimson; John Hopper, pink, crimson centre; Sénateur Vaisse, bright red; Louise Odier, bright pink; Maréchal Souchet, reddish crimson; Baronne Prevost, pale pink; Abdel Kadir, shaded crimson; Jules Margottin, bright cherry; Sidonie, rose-coloured; Maréchal Niel, deep yellow.

PROTECTING MARÉCHAL NIEL ROSE (M. E. S.).—"Maréchal Niel is a very hardy Rose, considering that it belongs to the Tea-scented family, and it answers admirably upon a Briar. I have twenty-five on its own roots and two on Manetti; I shall, therefore, be able in due time to say on which of the three it succeeds best. I advise 'M. E. S.' to put litter or dry straw over the roots, to tie loosely, so as not to exclude the air, to place straw or Asparagus haulm round the Briar stem, and to tie a padding of straw over the shoots, so as to admit air. If 'M. E. S.' has a greenhouse, this safest plan would be, as the shoots are only an inch long, to pot the Rose for the winter, using also the above precautions. I have two strong plants on Briars treated as above. Those on Manetti, on their own roots, and one sickly Briar plant, are planted out in my Melon-house.—W. F. RADCLIFFE."

MARÉCHAL NIEL ROSE CUTTINGS FAILING (Haddock).—The Rose cuttings cannot be failing from the heat, for a temperature of 50° would not prevent their growing; indeed a mild bottom heat of from 65° to 70°, and a top heat of 55° at night, would hasten their rooting. We think the cuttings have been too gross and immature, and have not formed a callosity, or if they have, the soil has been kept too wet and caused them to turn black at the base, which is not unusual. The cuttings would have succeeded, had they been inserted in sand in a cold frame and kept close and shaded from sun. September, or early in October, is quite late enough to

put in Rose cuttings. It is now late to put in cuttings of Roses. They should be put in so that a callus may be formed before winter, and it is all the better if they are put in during the summer, so that they may become well rooted before winter.

TAKING A HORNET'S NEST.—"Will some reader of this journal state how to proceed in taking a hornet's nest that is in the roof of the house, and built on the side of the kitchen chimney? I am anxious to preserve the nest.—A. W. Newbury."

FORMING A KITCHEN GARDEN (An Old Subscriber).—The subject was continued in vol. viii., page 490, and throughout vol. ix. In vol. ix., p. 497 of our first series is an article on the construction of walls, copings, &c. An article on walls will shortly appear in our pages, and will treat fully on the subject. The wall on the north side of the garden should not be less than 12 feet in height, but it may be made higher with advantage. That on the south side may be 10 feet high, and if the garden is extensive 12 feet would be preferable. The east and west walls should equal the height of the south wall. Walls 14 inches thick are as strong as need be, but 9-inch walls, when strengthened by piers, will serve, still they are very ugly, and are not so strong as hollow walls. A 14-inch hollow wall is very strong, and looks equally well with a solid one, and it is drier and equally substantial. The foundation of the wall, up to the ground line, is built solid, and then the brickwork is carried up hollow to within three or four courses of the top, which should be solid. The hollow part is built of headers and stretchers, every fifth header on both sides of the wall being a whole brick, whilst all the other headers are half bricks. Nine-inch walls, if carried up higher than 7 feet above ground, should have piers at every 12 feet, which need not exceed 18 inches broad for a wall 9 feet in height, whilst for a wall of 10 feet, and not exceeding 12 feet, from the foundation, piers 24 inches broad would be required, the piers in all cases projecting 4 inches, and they ought to be carried up to within 2 feet of the top. As to copings, those of stone are, perhaps, the best; but slabs of fire-clay are very durable. The copings should be 4 inches wider than the thickness of the walls, which will allow of two-inch projections on both sides. The coping should be raised in the middle, so as to cause the wet to pass off; or, if flat, the side next the most important side of the wall should be raised to cause the water to drain to the least important side. On the under side of the coping, near to the outer edge of the projection, should be a grooved throating for the water to drip off, instead of running down the wall. Your border of 6 feet is too narrow, unless your wall is low. The border should equal the height of the wall in width. No trees, other than those planted against the wall, should be planted in the border. Espaliers next the wall, unless very low, would shade the border too much; they should be placed on the opposite side of the walk to the border. Your other query is very comprehensive, and would require more time and space than we can afford to devote to it at present, but the subject will be treated on fully in an early number.

YEW HEDGE TRIMMING (F. H. Law).—"We would not thin out every other plant, for though planted very thickly they will make an impenetrable fence, and there is no fear of their dying off if left as they are. All you have to do is to keep it well cut in, and this should be done annually, early in August. If your hedge is intended for a screen, rather than for a fence, you may take out every alternate plant; but you will not then have a fence proof against cattle, and as a screen four years' growth will be required to make the hedge close. The trees may be removed now or during mild weather up to April; but unless you require the plants for other purposes, we would advise you to leave well alone.

HEATHS FOR BLOOMING IN AUGUST AND NOVEMBER (Q. Read).—For August: *Ventricosa grandiflora*, *Cavendishii*, *Ventricosa hirsuta*, *Ventricosa Bothwelliana*, *Rolissini*, and *Vesitara rosea*. For November: *Wilmoriana*, *McNabiana rosea*, *Tricolor Wilsoni*, *Pulcherrima*, *Hymalis*, and *Lambertiana*.

AZALEA LEAVES BROWNED (R. S. F.).—We think your plants have during the summer been kept much too warm and dry, and have not had a sufficient supply of water at the roots. The leaves sent are not infested with insects of any kind, and we cannot discover they have been so. The drainage should be examined, and rendered efficient if defective. The cause of the brownness is probably that named; and the evil also sometimes results from a sudden change. Exposing the pots in summer to the sun's rays, which heat them and destroy the roots, or allowing the drainage to become choked, will have a like result, and the leaves brown from want of support and ultimately fall. We would advise you to keep the plants rather dry during the winter, in a cool house from which frost is merely excluded, care being taken not to allow them to suffer from want of water, and in spring repot them immediately after blooming. After potting place them in a house with a moist atmosphere and a temperature of not less than 55° at night, and a day temperature of 65° from fire heat; sprinkle them overhead with water morning and evening; and sprinkle the floors and every available surface two or three times a-day in order to produce a moist atmosphere. The plants should be carefully watered for a time until the roots are working in the fresh soil, when the watering should be liberal. This treatment ought to be continued until they have ceased growth, when they should be gradually hardened off by exposure to light and air, and they will speedily set their buds, which being secured, they should have a light and airy position in a cool house. They require a temperature of 40° to 45° from fire heat after the buds are set and until they start into growth in spring.

PEAR-TREE TRAINING (E. T. W.).—Pear trees may be trained upon wires fixed 1 foot above the ground, but we would prefer them 18 inches from the ground, as the fruit, when the branches are so near the ground, is liable to have dirt splashed upon it during heavy rains, and the wires are apt to bend downwards owing to the weight of the branches and fruit. Only two shoots will be required, or one on each side of the stem, and beyond those all others should be cut away, dependance being placed upon the spurs for fruit.

PEGGING DOWN ROSES (Idem).—Roses on the Manetti in beds on a lawn may be pegged down, so that the branches may lie upon the surface, providing it can be done without breaking them. It is quite optional whether the shoots be pegged down or not, and for our own part we prefer them not pegged. It is a matter of taste; but though you may have a mass of bloom from plants pegged down, you must not expect a great profusion of it.

CHASSÉLAS MUSQUÉ VINE (Rector, Kent).—There is no such Grape as "Chasselas Muscat," it must be Chasselas Musqué.

GERNERA ZERRINA RESTING (*Rector, Kent*).—You may now almost totally cease watering them, but it would be well to give a little water occasionally, say once a week, until the foliage decays. The stems should not be cut down until the flower-stems decay or become dried up. You will do well to assign to them a light and airy situation, and if you can give them heat so, as the better this year's growths are matured the stronger will be the roots. You may have them in bloom earlier by potting the roots in March and plunging the pots in a cucumber-frame or other hotbed, and by thus forwarding them in heat they will bloom by September or even earlier according to the temperature. They require a stove or vinery, which is only a sort of stove where forcing is carried on.

GOOSEBERRY AND CURRANT BUSHES PRUNING (*J. D. M.D.*).—You should well thin out the shoots from the centre of the bushes, and cut-in all the side shoots upon the main branches to within half an inch of their base. The main branches should be left from 9 inches to 1 foot apart. The terminal shoot of the branch may be reduced two-thirds of its length, and only have the end taken off if the shoot be rightly disposed and extension required. The soil should be taken out with a spade from around the stems of the bushes, and down to the roots, without cutting or disturbing these. It may be removed for a distance of from 18 inches to 2 feet from the stem. Into this sort of trench you may place a layer of well-rotted manure 3 inches thick all over, and then cover it with soil an inch or two deep. You may then manure the remainder of the ground between the rows and dig the manure neatly in, not going so deep as to injure the roots. In summer you may water liberally during dry weather with liquid manure.

PLANTS FOR A NORTH BORDER (*Fred.*).—You may plant in your north border single and double red and blue, and single white Hepaticas, Winter Aconite, Snowdrops, Scilla sibirica, the common Primrose, and its double white, lilac, and crimson varieties. These will render the border gay for the early spring months.

SOOT AS MANURE FOR RUBUS (*Idem*).—Soot is an excellent manure for almost all plants and bulbs. It may be applied to plants in borders when they are in active growth or are commencing growth, and should be sprinkled around them so as to blacken the soil, or just cover the ground; it may be pointed in with a fork. Plants or bulbs in pots may be watered twice a week with soot water, and that is the best means of applying it to plants in pots. Use a peck of soot to thirty gallons of rain water, stir well, allow the liquor to settle, and use the clear liquid for watering with.

WALTONIAN CASES (*Idem*).—These are not now so much sought after as they formerly were by amateurs, but these now advertised in our columns are improvements upon the original. We do not know where the old ones are to be obtained. Mr. Gray, Horticultural Builder, Daavers Street, Chelsea, London, would be likely to furnish you with the information you require.

HARDY AND HALF-HARDY PLANTS FOR BOUQUETS (*A Cottage Gardener*).—You should plant Sweet Williams, Pinks, Carnations, and especially the old Clove, pretty extensively; and you cannot have too many Roses; and a few plants of Sweet Briar and the common Southernwood will be found useful. *Campanula agrostata*, *Daphne eucyrtum*, *Delphinium Belladonna*, *formosum*, *alopecurioides*, and *Wheeleri*; *Gladiolus gandavensis* in variety, *Glycerium argenteum*, *Hypericum calycinum*, *Lathyrus grandiflorus* and *L. latifolius*; *Lilium chalcedonicum*, *lancifolium superbum*, and *aurantiacum*; *Lychnis Hæagonia*, herbaceous *Phlox* in variety, double *Pyrethrum*; *Salvia argentea* for its foliage, *S. nemorosa*, *Tritoma naria*, *Tritoma aurea*, and double Rocket. Of half-hardy plants, bedding Pelar-

goniums, shrubby *Calceolarias*, *Salvia patens* and *splendens*, *Verheusea*, *Heliotropo*, German Ten-week Stocks; German *Aster*, *Phlox Drum-mendi*, Branching Larkspur, and plenty of *Mignonette*.

FILBERT CULTURE (*A Cottage Gardener*).—Refer to what was said in reply to a correspondent at page 410, which will meet your case, we think, and which you doubtless have seen.

WINERFING AND PROPAGATING HOLLYHOCKS (*Streatham Common*).—If your soil is dry and light you may leave the plants where planted during the winter, protecting them with cocoa-nut fibre and ashes as you propose; but if the soil is heavy, wet, and cold, it will be well to take them up and store them in cocoa-nut fibre and ashes in a cold frame for the winter. By making cuttings in spring, as proposed, you will obtain a late bloom. For cuttings choose the young shoots, taking them off close to the old root as soon as they are 2 or 3 inches in length, potting them singly and firmly in three-inch pots, placing them in a cold frame, drawing the lights on closely, and affording them shade from sun. The cuttings ought to be carefully watered. In a week or ten days a little air may be admitted, and when well rooted they may be freely exposed whenever the weather is favourable. If you take cuttings in February or March they should have the benefit of a mild hotbed.

DISSOLVED BONES FOR PELARGONIUMS (*Thornton-le-Moor*).—The superphosphate of lime formed by dissolving bones for manuring Turnips is equally employable for Pelargoniums. It should be used sparingly to the Tricoloured, for excessive luxuriance will deteriorate the colours. Two parts sand and one part light turfy loam, with a little half-inch bones of rubbly charcoal, mixed together, are employed for striking the cuttings.

WINTER FLOWER GARDEN (*A Flower Gardener*).—As we do not know the "Ashwick Rectory," we cannot ask for a list of the "variegated herbaceous plants" he employs.

HOT-RED THERMOMETER (*H. H.*).—Thermometers for ascertaining the interior temperature of hot-beds are now obtainable at any philosophical instrument maker's. The price is about five shillings, we believe.

SEEDLING PEAS (*J. Wighton*).—Your large green seedling is very promising, but we cannot say much for the small one.

PELARGONIUMS (*W. A. Glynn*).—Nos. 2 and 3 appear to be the same variety. No. 1 seems to be new, and is certainly pretty; but we always decline naming or identifying florists' flowers. The leaf you enclosed is that of *Gyanostachyum Verschaffeltii*, also called *Eranthemum rubrovenium*.

SEEDLING CHOROZEMA (*A Subscriber*).—The flowers are more richly coloured than those of its parent, *Chorozema varium*, and if, as you say, they are produced "very freely all the winter," it will be an acquisition.

SEEDLING PELARGONIUMS (*W. M. Bradley*).—No one can form an opinion of the merits of a Pelargonium from a single pip and single leaf.

NAMES OF FRUITS (*J. Elcome*).—3, Uvedale's St. Germain; 4, Calchasse; 5, Marie Louise; 6, Glon Morcean; 7, Winter Nelia. (*W. R. N.*)—1, Beurre Diel; 2, Forelle; 3, Passe Colmar. (*Wysside*).—It is impossible to name your Vine from a piece of the young wood. The fruit always, and a mature leaf often, is necessary to be seen for identification.

NAMES OF PLANTS (*A Young Gardener*).—We cannot name a plant from seeing a single leaf of it. (*Q. Reid*).—1, *Selaginella Kraussiana*; 2, *S. Martensii*; 3, *Adiantum affine*; 4, *A. formosum*; 5, *Gymnogramma chrysophylla*; 6, *Erica colorata*. (*W. F. M.*)—*Aralia nudicaulis*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending December 3rd.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 27	30.280	30.098	47	17	43	44	W.	.00	Sharp frost; overcast and cold; clear and frosty.
Thurs. 28	30.295	30.284	47	17	44	43	W.	.00	Clear, hear frost; clear, bright sun; clear and frosty.
Fri. . . 29	30.284	30.232	43	24	43	44	S.W.	.00	Low fog, frosty; clear, bright sun; clear and frosty.
Sat. . . 30	30.257	29.531	56	38	45	43	S.	.23	Overcast; overcast and cold; slight rsin; overcast, rain.
Sun. . . 1	29.296	28.972	55	25	46	43	S.	.30	Overcast and damp; densely overcast, heavy showers; strong wind
Mon. . . 2	29.732	29.528	86	23	43	44	N.	.00	Very boisterous, slight fall of snow; boisterous and snowing; clear
Tues. . 3	30.247	29.963	40	28	43	43	N.	.00	Cloudy and very cold; partially overcast; clear and cold. [and frosty]
Mean	30.056	29.801	47.14	21.57	43.57	43.43	..	0.59	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

JUDGING POULTRY.

"AN EXHIBITOR," in noticing my remarks on this subject in the report of the Bristol and Clifton Show, suggests that it would be wiser to assign to each judge the classes with which he is most conversant. This, I believe, is often done; but in this case, I think, it would be a still better plan to let each judge, after having judged his portion, criticise the other's decisions. If it is simply want of time, let more time be given; but recollect that at Bristol a whole day was given up to judging, yet certainly one or two glaring errors were committed. I can understand that the reasons which first induced a judge to select a given pen for a cup always press upon him when he examines the pen, but might be modified by fresh criticism. We are disposed to let our first opinions retain their hold on us. Moreover, it is quite possible that a deformity may be

overlooked, especially when, as in the case of one or two a Bristol, the pen is otherwise most magnificent. In the deformities of the tail, this latter is not always carried wrongly but very often assumes its correct position. As I mentioned in my "Dottings," this was observed in the single Cochins cock that was awarded first prize; the carriage of tail was noticed, but the bird appeared to have the power of holding it correctly if he pleased. Later, many agreed as to the deformity.

"AN EXHIBITOR" says the plan I propose would require more time. I do not see that this is made out; and even if so, better have more time and less dissatisfaction afterwards. I am well aware that judges will differ as to the merits of given pens; but my suggestion for a third judge was only intended to avoid glaring cases; and in case of difference it would then be not "over-ruling" the decision, but reconsidering it, and allowing the majority to decide.

"AN EXHIBITOR" then says that, judging from my own case, it would fail, as I fell into errors! Well, my error was so glaring that it would not have taken a lengthened consultation to convince me. A look at the pen would have been sufficient

and the catalogue, not being printed, would not have made me write "black" for "brown." If "AN EXHIBITOR" refers to the catalogue he will see they are there called "Black Reds," and it was following the latter without really thinking of the birds themselves that led me into the error. "AN EXHIBITOR" himself falls into a very great error when he imagines me with unlimited time at my disposal. This is far from the fact. I assure him that "Y. B. A. Z." is never so fortunate as to have "the whole period of the Exhibition for his observation," but is forced to make his "Dottings" far more rapidly. I do not think I spent more than three hours and a half in the Drill Hall. I was there, however, almost as soon as it opened, and I can assure "A SUBSCRIBER" that the prize White Dorking cockerel was tailless then.

This brings me to another point that I should very much like to understand—namely, whether the attendants on birds—I mean the servants of the owners, are allowed to enter the exhibition before the time open to the public; whether they deliver up their specimens at the doors of the exhibition; or whether they follow them within the threshold and give a helping hand to penning their birds. If the latter, all exhibitors are not placed on the same footing.—Y. B. A. Z.

As I feel assured that poultry culture and poultry shows are unquestionably among the most popular features of the present day, I trust a very brief comment on the suggestions made with respect to my remarks a few weeks ago on the brevity of time allowed for judging, will be permitted me, as I must express my entire disbelief, from personal practice, in the remedies suggested by your correspondents, "Y. B. A. Z." and "AN EXHIBITOR."

I desire to take up as little of your valuable space as possible, and trust that though I must differ from both of the contributions referred to, the writers will give me credit for the anxious desire to attempt any practicable improvement that either of these gentlemen, or any other individual, may yet suggest to meet the difficulty.

It is, perhaps, prudent again to remind those who are willing to give a helping hand, that though the insufficiency of time given to the arbitrations was the matter I complained of in the remarks I sent to you, yet it was coupled most intimately with the fact, it was the after abbreviation of the period at first appointed that I more especially referred to. Every one knows sufficiently well that a largely increased number of arbitrators might be reasonably expected to prevent this unpleasantness, and that classes might be appointed so as to meet the views and efficiency of the various judges engaged. This, though quite apart from the gist of my former communication, can most unreservedly be admitted, but it inevitably brings with it a result looked upon by most committees with whom I am acquainted, as of still greater dread than heretofore—that even when confined to travelling expenses, several additional calls on the society's coffers must be made, which cannot be entertained. My position was, that the stipulated full time originally allotted to judges ought, under every circumstance, to be invariably the rule enforced on all parties alike, be they who they may, and that thus arbitrators might proceed to duty without deviation from the original arrangements, that, if broken, necessitated oftentimes three hours' work being attempted at the last moment in one hour.

The suggestions for improvement in the saving of time, if I rightly comprehend them, made by "Y. B. A. Z." and "AN EXHIBITOR," have, undoubtedly, originality about them; but their sufficiency on application appears to me worse than questionable. The first-named writer seems to indulge the hope that an after-scrutiny by, as it were, a second investigation from a judge in the rear of those making the awards, would expedite matters; but as calling back for reconsideration seems a most unlikely expedient to produce so very desirable a result, I need not say more on that point.

On the other hand, "AN EXHIBITOR" has his remedy. Dare I say, it suggests "out of the mud into the river"—viz., to stop and leave all remaining classes unjudged if the time is not sufficient, rather than make the attempt at completion. For only one moment indulge in the supposition that this latter course was obeyed to the letter. The arbitrator, the committee, and any other official that happened to be present, might well esteem deafness a blessing, and very probably he would need almost the covering of the rhinoceros itself to escape even bodily injury from the infuriated and neglected portion of the exhibitors, who would, I fancy, quite fail to recognise the justice of carefully judging one portion of the

classes and leaving the others entirely neglected. I feel at present uncounvinced that any after-remedy can supply the want of an insufficiency of time for arbitrations. Why, then, unnecessarily abridge it by want of punctuality at the beginning?—EDWARD HEWITT.

BIRMINGHAM POULTRY SHOW.

THE short time that elapses between the opening of the Show and our going to press, necessitates a short and hurried review. This will be made more apparent when we say that our paper is issued before the Show is closed. We may, however, state that we speak of the best, and we believe the largest, Show on record—upwards of 2600 pens of Poultry and Pigeons. The spirit of innovation does not lag in this great city, but, wise in their generation, they make their innovations to be improvements. While they meet the views of exhibitors, they increase their profits. Thus one of the great uses of these Shows is to enable breeders to choose birds for the introduction of fresh blood; another is to buy stock birds. The first wanted either a cock or two, or more pullets; the second a stud to start with, but the latter wished to have birds of different strains. Both were unobtainable under the old régime. At the outset, pens were composed of cock and three hens or pullets. Whoever wanted a cock was obliged to take three hens he did not want, while he who wanted a couple of pullets had to take an extra one and a cock. To obviate this, classes were introduced for single cocks. They were an accommodation, but the public asked for something more; therefore, last year the classes were divided into those for single cocks, two hens, and two pullets. Some doubted whether these classes would be a success: this year has proved that they are. The novelty of the Show was the attempt to sell by auction all the prize-taking and commended pens. We must speak of this next week. If it succeed it will be profitable, as the surplus above the price at which the pen is entered will be divided between the exhibitor and the Society. We will now suggest the extension of the alteration to the Turkeys. The cock Turkeys are always in request. The prize list we publish will give the list of the successful, and we will, therefore, content ourselves with noticing the prominent features of the different classes.

We begin with *Dorkings*. New names appear here, and increased weight was the rule. Prize cocks were 12½ and some 13 lbs. each; hens weighed 8 lbs. each, and upwards in many cases; pullets 7 and 7½ lbs. each. An old exhibitor, Admiral Hornby, was unsuccessful, owing to a mistake in having two cocks, the old being put among the young, and the young among the old, disqualifying both. Many of the successful birds were of high merit; Messrs. White, Fox, Statter, Campbell, with many others, deserve every credit for the quality of birds they showed; they deserve their success. Many of the same names come first in hens and pullets. The Hon. Mr. Fitzwilliam was especially successful. The Silver-Gray pullets were very beautiful, nothing could surpass them; but the cocks bore out the old opinion as to the difficulty of getting them able to answer all requirements. White feathers in the tail, white spots on the breast told their tale in the absence of commendations in a large class. White Dorkings were very good. These end this breed—320 pens. In no classes do we find so many of the nobility and gentry exhibitors as in these.

Cockin-Chinas brought 331 pens. Here, again, we can speak in terms of high commendation. Extra prizes of plate in many of the classes stimulate exhibitors. The Hon. Miss Pennant, Messrs. Taylor, Mapplebeck, White, Tudman, and Dawson deserved all they gained.

One hundred and forty-five pens of *Brahma Pootras* testified to the popularity of these beautiful and useful birds, and must tend to convince those who maligned them years since, and denied their purity, that they were in error. Many of them, however, were not as good as we have seen; Messrs. Tomlinson, Boyle, and Colonel Lane, with Mrs. Hart and other prizetakers, were, however, exceptions. The Light were very good. Two silver cups were offered in these classes. They were gained by Messrs. Dowsett and Crook; while Mr. Pares added to his many laurels by taking two first and a second prize.

The *Malays* were good in both classes, but they were not numerous. The *Crève Coeurs* and *Houdans* were numerous and good, but the *La Flèche* were few and indifferent in quality. We do not hesitate to say so many good *La Flèche* cocks were never before shown in England, many of them were perfect; pullets the same. In all these classes Colonel Stuart Wortley was very successful, taking three first prizes and two silver cups.

Twenty-three *Spanish* cocks were named in the prize list. The worst of them richly deserved the distinction. Improvement is the rule; the faces are smoother, the combs are better in shape and firmer. Praise must not be confined to the cocks, the hens and pullets were equally good; we cannot speak too highly of those shown by the Hon. Miss Pennant, who took the first prize in each class. All these classes were especially even, and were filled with good birds. They also introduced many new names.

Bingley Hall is now the only place where Black *Hamburghs* are to be seen in any numbers. They formed a goodly array, and were unquestionably beautiful birds. The Golden and Silver-pencilled were worthy of their best days. Twenty-seven pens were noticed in the prize list. We recognised many old names, but the onward progress

of this great Show was again marked by the new names that appeared. The forward position of these latter will keep the former on their mettle, and render careful breeding necessary. The Rev. T. O'Grady will be among those who will be difficult to distance. The Golden and Silver Spangled were in great strength. Forty-two pens established their claim to a sale by auction. It is long since we have seen them so meritorious, especially the Silvers, that reminded us of the birds we used to see at Liverpool years ago.

Silver *Polands* increase largely in entries and quality. We can also speak well of the Golden and Black with white crests. The success of Mr. Adkins in Silver, and Mr. Silvester in Golden, was remarkable; each gentleman took four prizes.

The multiplication of classes tends to lessen the variety class. There were *Cuckoos*, *Bredas*, *Silksies*, also some very curious *Guinea Fowls*. The *Cuckoos* were unusually good, and the most numerous in the class.

Game are always game, and that is saying a great deal. They are models of shape and condition. It would seem that those who show these birds understand the art of sending them in perfect health and condition. Yet, where all are good, there will be better, and even best. Such were Mr. Wood's two first prize pens of Brown Reds, the Duke of Newcastle's, Messrs. Mellor's, Jacob's, and Chaloner's. It seems almost invidious to name these, but they had unusual merit. Mr. Chaloner's was one of the best birds we ever saw. The *Duckwings* were not unworthy of their brethren, and showed in unusual numbers, coupled with great merit. Mr. Bradley's was a beautiful bird. The *White* and *Piles* were weak.

Gold-laced *Bantams* were as usual weak in numbers and quality. The *Silvers* were better in every way, and among them were some right good birds. It must, however, be said that, as a whole, they are not equal to what they were. *White Bantams* did little for themselves or the Show. Blacks made rounds. They were very good, and formed an excellent class. Everything connected with poultry should be understood now, but there seem people who think a *Sicbriht* and *Black Bantam* should differ only in colour. We may safely say of the *Game Bantams* that which we said of the *Game cocks*. They were in every way perfect.

The *Rouen* have again beaten the *Aylesbury Ducks*. The *Aylesbury Ducks* of Mrs. Seamons weighed 18 lbs. the pair; Mr. J. K. Fowler's 17½ lbs. the pair. Mr. S. Shaw's *Rouen Ducks* weighed 19½ lb. per pair; and Mr. Statter's 18 lbs. the pair. The *White Gander* and *Goose* of Mrs. Seamons weighed 54½ lbs.; Mr. G. Hunter's *Gander* and *Goose*, at seven months old weighed 44 lbs.; Mr. J. K. Fowler's *Grey Gander* and *Goose* weighed 54 lbs., and his *Grey Gander* and *Goose* at seven months old weighed 45½ lbs. Mr. J. Smith's *Turkeys* weighed 50 lbs. the pair, and his *Turkeys*, six months and a half old, weighed 36½ lbs.

We shall give further particulars next week.

POULTRY.

DORKING (Coloured, except Silver-Gray).—*Cocks*.—First, J. White, Warley, Northallerton. Second, T. Statter, Stand Hall, Whitehead, near Manchester. Third, Messrs. Gunson & Jefferson, Whitehaven. Fourth, Mrs. Arkwright, Etwall Hall, Derby. Fifth, Duke of Newcastle, Clumber, Worksop, Notts. Sixth, A. Potts, Hoole Hall, Chester. Highly Commended, Admiral W. Hornby, Knowsley Cottage, Prescot; D. C. Campbell, M.D., Brentwood, Essex; F. Parlett, Great Baddow, Chelmsford, Essex. Commended, W. H. Walker, Shenfield, Brentwood, Essex.

DORKING (Coloured, except Silver-Gray).—*Cockerels*.—First and Silver Cup, J. Fox, St. Bees, Cumberland. Second, D. C. Campbell, M.D. Third, H. Lingwood, Barking, Needham Market, Suffolk. Fourth, F. J. Liebert, Wollesbourne Hall, near Warwick. Fifth, Messrs. Gunson & Jefferson. Sixth, F. Parlett. Highly Commended, Duke of Newcastle; Mrs. G. Canning, Harpurly, Gloucestershire; Rev. A. K. Cornwall, Bencombe, Dursley, Gloucestershire; L. Richards, Glendon Lodge, Kettering, Northamptonshire; J. Smith, Henley-in-Arden; R. P. Williams, Glasslough, Clontarf, Dublin. Commended, Mrs. Arkwright, Etwall Hall, Derby; J. Robinson, Vale House, near Garstang; F. Parlett.

DORKING (Coloured except Silver-Gray).—*Hens*.—First, J. Fox. Second, T. Statter. Third, Lieut.-Col. H. B. Lane, Lily Hill, Bracknell, Berks. Fourth, Admiral W. Hornby. Fifth, A. Potts. Sixth, H. Beldon, Gostock, Bingley, Yorkshire. Highly Commended, A. Potts; Mrs. Arkwright, Commended, Duke of Newcastle; Messrs. Gunson & Jefferson.

DORKING (Coloured, except Silver-Gray).—*Pullets*.—First Second, and Fourth, Hon. H. W. Fitzwilliam, Wentworth Woodhouse, Rotherham. Third, Mrs. Arkwright. Fifth, Admiral W. Hornby. Sixth, Duke of Newcastle. Highly Commended, Messrs. Gunson & Jefferson; E. Shaw, Oswestry; Hon. H. W. Fitzwilliam; J. Robinson; Mrs. Arkwright; G. J. Mitchell, Newton Mount, Burton upon Trent; Miss M. Heath, Myton Grange, Warwick; J. Faulkner, Burton upon Trent; Miss H. Smith, Henley-in-Arden. Commended, Mrs. Seamons, Hartwell, Aylesbury, Bucks; S. Burn, Whitby, Yorkshire; H. Humphrey, Worthing, Sussex; Admiral W. Hornby; D. C. Campbell.

DORKING (Silver-Gray).—*Cocks*.—First, J. Faulkner. Second, R. Smalley, Lancaster. Third, E. Shaw. Highly Commended, Lady Bagot, Blithfield Hall, Rugby.

DORKING (Silver-Gray).—*Hens or Pullets*.—First, Rev. J. F. Newton, Kirby-in-Cleveland, Yorkshire. Second, Miss J. Milward, Newton St. Lee, near Bristol. Third, T. Statter. Highly Commended, W. H. Denison, Woburn Sands, Beds; Rev. W. J. Mellor, Colwick Rectory, near Nottingham; T. D. Wright, Great Barr, near Birmingham; Lady Bagot; Mrs. Seamons; Lieut.-Col. T. West, Stafford. Commended, Lady Des Vaux, Drakelow, Burton upon Trent.

DORKING (White).—*Cocks*.—First, H. Lingwood. Second and Third, J. Robinson. Highly Commended, Mrs. Hayne, Fordington, Dorchester; H. Lingwood.

DORKING (White).—*Hens or Pullets*.—First, H. Lingwood. Second, H. Savile, Rufford Abbey, near Orleton, Notts. Third, Mrs. Syson, Empingham, near Stamford.

COCHIN-CHINA (Cinnamon and Buff).—*Cocks*.—First, Mrs. R. White, Broomhall Park, Sheffield. Second, Col. Stuart Wortley, Grove End Road, London. Third, H. Tomlinson, Moseley, near Birmingham. Fourth, Hon. Miss Douglas Pennant, Penryn Castle, Bangor, North Wales. Fifth, D. Young, Leamington. Highly Commended, H. Tomlinson; H. Mapplebeck, Woodfield, Moseley, near Birmingham. Commended, H. Mapplebeck.

COCHIN-CHINA (Cinnamon and Buff).—*Cockerels*.—Cup and First, W. A. Taylor, Manchester. Second, J. Cattell, Bristol Road, Birmingham. Third, J. Siebel, Timperley, Cheshire. Fourth, Messrs. Gunson & Jefferson. Fifth, Hon. Miss Douglas Pennant. Highly Commended, H. Tomlinson; H. Mapplebeck; H. Wade, Birmingham; W. A. Taylor, Manchester; R. White, Sheffield. Commended, C. Hemus, Harborne, near Manchester; G. Fell, Springfield, Warrington.

COCHIN-CHINA (Cinnamon and Buff).—*Hens*.—First and Third, H. Mapplebeck. Second, C. T. Bishop, Birmingham. Fourth, W. A. Taylor. Fifth, H. Tomlinson. Highly Commended, C. W. Brierley, Middleton, Manchester; G. Fell; J. Ansell, Aston, near Birmingham. Commended, F. J. Ashbury, Encliffe, Prestwich, Manchester.

COCHIN-CHINA (Cinnamon and Buff).—*Pullets*.—First, Hon. Miss Douglas Pennant. Second, W. A. Taylor. Third, H. Lingwood. Fourth, H. Mapplebeck. Fifth, Mrs. R. White, Sheffield. Highly Commended, H. Mapplebeck; Col. Loisey, The Park, Cheltenham; H. Wade, Rev. G. Gilbert, Claxton, Norwich. Commended, A. H. Lattley, Shrewley, near Warwick; C. Hemus; Rev. C. Spencer, Attleborough, Norfolk; H. Tomlinson.

COCHIN-CHINA (Brown and Partridge-feathered).—*Cocks*.—First, R. White. Second, E. Tudman, Ashgrove, Whitechurch, Salop. Third, A. O. Worthington, Burton upon Trent. Highly Commended, R. White; Col. J. A. Ewart, Tatenhill, Burton upon Trent. Commended, R. W. Boyle, Bray, Co. Wicklow, Ireland.

COCHIN-CHINA (Brown and Partridge-feathered).—*Cockerels*.—First and Amateur's Sweepstake, E. Tudman. Second, R. White. Third, E. Shaw. Highly Commended, E. Trevel, Fulwood, near Preston, Lancashire; J. R. Rodbard, Aldwick Court, Writton, near Bristol. Commended, J. S. Senior, Dewsbury.

COCHIN-CHINA (Brown and Partridge-feathered).—*Hens*.—First, E. Tudman. Second, G. Lamb, Compton, near Wolverhampton. Third, C. W. Brierley, Middleton, Manchester. Highly Commended, E. Tudman.

COCHIN-CHINA (Brown and Partridge-feathered).—*Pullets*.—First, J. R. Rodbard. Second, A. O. Worthington. Third, F. Crossley, Eiland, Halifax, Yorkshire. Highly Commended, E. Tudman; F. Crossley; E. Shaw; Messrs. Bowman & Fearon, Whitehaven, Cumberland. Commended, Messrs. Bowman & Fearon.

COCHIN-CHINA (White).—*Cocks*.—First and Extra Prize, R. Smalley, Lancaster. Second, R. Chase, Balsall Heath, Birmingham. Third, A. Comyns, jun., Arleuaine, Glenageary, Kingstown, Co. Dublin.

COCHIN-CHINA (White).—*Cockerels*.—First, W. Dawson, Hopton, Mirdale, Yorkshire. Second and Third, Rev. F. Taylor, Kirkcaldrews Rectory, Longtown. Highly Commended, Miss Biggar, Ecclefechan, Dumfriesshire; W. Dawson; Mrs. Williamson, Leicester.

COCHIN-CHINA (White).—*Hens*.—First, A. O. Worthington, Newton Park, Burton upon Trent. Second, G. Lamb, Compton, near Wolverhampton. Third, Rev. F. Taylor, Kirkcaldrews Rectory, Longtown. Highly Commended, R. Chase, Balsall Heath, Birmingham; Mrs. Williamson, Queenborough Hall, Leicester.

COCHIN-CHINA (White).—*Pullets*.—First and Third, Rev. F. Taylor. Second, R. Chase. Highly Commended, R. Chase; Mrs. Williamson; A. O. Worthington.

BRABIA POOTRA (Dark).—*Cocks*.—First, H. Tomlinson, Moseley, near Birmingham. Second, H. Lacey, Hebban Bridge. Third, R. W. Boyle, Bray, County Wicklow, Ireland. Highly Commended, Hon. Miss Douglas Pennant, Penryn Castle, Bangor, North Wales; Mrs. Bailey, Shooter's Hill, Longton, Staffordshire; K. Jopp, Aberdeen. Commended, Mrs. Hunt, Alderwasley, Derby.

BRABIA POOTRA (Dark).—*Cockerels*.—First and Cup, Mrs. Hunt. Second, J. Anderson. Third, R. W. Boyle. Highly Commended, Hon. Miss Douglas Pennant; R. W. Boyle; M. Leno; L. Wright, Kingsdowne, Bristol; R. White; W. Hargreaves, Baccup, Manchester. Commended, H. Lacey; Rev. J. F. Newton; L. Wright; Mrs. Hunt.

BRABIA POOTRA (Dark).—*Hens*.—First, Lieut.-Col. H. B. Lane, Bracknell. Second, H. Lacey. Third, Messrs. Bowman & Fearon, Whitehaven. Highly Commended, K. W. Boyle. Commended, Hon. Miss D. Pennant.

BRABIA POOTRA (Dark).—*Pullets*.—First, R. W. Boyle. Second, H. Lacey. Third, W. Hargreaves. Highly Commended, Mrs. Seamons; T. Pomfret; R. W. Boyle; J. Pares. Commended, Lieut.-Col. H. B. Lane; E. Higson, Lymstone; H. Dowsett, Chelmsford; M. Leno.

BRABIA POOTRA (Light).—*Cocks*.—First and Cup, H. Dowsett. Second, A. O. Worthington. Highly Commended, Mrs. H. Dean, Upton. Commended, J. Pares, Guildford.

BRABIA POOTRA (Light).—*Cockerels*.—First, Second, and Highly Commended, J. Pares.

BRABIA POOTRA (Light).—*Hens*.—First, Cup, and Second, F. Crook, Forest Hill. Highly Commended, H. Dowsett; J. Pares.

BRABIA POOTRA (Light).—*Pullets*.—First, J. Pares. Second, H. Dowsett. Highly Commended, A. Herbert, Egham.

MALAY.—*Cocks*.—First, Rev. A. G. Brooke, Ruyton L. T. Nova. Second, W. Lort, Birmingham. Highly Commended, J. C. Cooper, Limerick.

MALAY.—*Hens or Pullets*.—First, Rev. G. Hustler. Second, T. Hollis, Reading. Highly Commended, Rev. A. G. Brooke.

CRAB-CURIA.—*Cocks*.—First and Cup, Col. Stuart Wortley. Second, E. W. Zorhorst, Dublin. Highly Commended, Col. Stuart Wortley; W. Blinkhorn. Commended, Hon. H. W. Fitzwilliam; G. Doubleday.

CRAB-CURIA.—*Hens or Pullets*.—First, Col. Stuart Wortley. Second, W. Blinkhorn. Highly Commended, Col. Stuart Wortley; W. Blinkhorn; A. Dixon, Erdington; F. W. Zorhorst.

HOODANS.—*Cocks*.—First, F. B. Heald, Whitmore. Second, Col. Stuart Wortley. Commended, W. Tippler, Roxwell, Chelmsford; T. Bamfield, Clifton, Bristol.

HOODANS.—*Hens or Pullets*.—First and Cup, Col. Stuart Wortley, Grove End Road, London. Second, F. B. Heald, Whitmore, near Nottingham. Highly Commended, Col. Stuart Wortley; S. A. Wylie, East Moulsey, Surrey.

LA FRÉCHÉ.—*Cocks*.—First, Col. Stuart Wortley. Second, Hon. H. W. Fitzwilliam.

LA FRÉCHÉ.—*Hens or Pullets*.—First, M. Leno, Markyate Street, near Dunstable, Beds. Second, Col. Stuart Wortley.

SPANISH.—Cocks.—First, T. Cole, Birmingham. Second, J. H. Wilson, St. Bees, Cumberland. Third, J. Stevens, Macclesfield. Fourth, H. Lane, Bristol. Highly Commended, J. Clegg, jun., High Crompton, near Oldham. Commended, Hon. Miss D. Pennant; W. R. Bull, Newport Pagnell, Bucks; O. Drewry, M.D., Walsall.

SPANISH.—Cockerels.—First and Cup, Miss Biggar, Ecclefechan, Dumfries. Second, A. Heath, Colne. Third, R. Teebay, Fulwood, near Preston. Fourth, H. T. Edge, Edgaston, Birmingham. Highly Commended, Hon. Miss D. Pennant; T. Bamfield, Brandon Hill, Clifton; J. W. Edge, Birmingham; R. Paton, Kilmarnock; W. R. Bull; L. Ede, Worthing, Sussex. Commended, J. H. Wilson; F. James, Peckham Rye; E. Cambridge, Bristol; Messrs. Burch & Boulter, Sheffield; R. Teebay.

SPANISH.—Hens.—First, Hon. Miss D. Pennant. Second and Third, A. Heath. Fourth, W. Paterson, Langholm, Dumfries.

SPANISH.—Pullets.—First, Hon. Miss D. Pennant. Second, H. Lane, Third, M. Farrand, Dalton, near Huddersfield. Fourth, F. James, Highly Commended, W. R. Bull; Hon. Miss D. Pennant. Commended, Messrs. Cawley & Bailey, Alderley Edge, near Manchester; E. Cambridge.

HAMBURG (Black).—Cocks.—First, J. Robinson, Vale House, near Garstang. Second, H. Beldon. Third, S. Shaw, Stainland, Halifax. Highly Commended, G. Lingard, jun., Birmingham; J. Munn, Stacksteads, near Manchester.

HAMBURG (Black).—Hens or Pullets.—First, C. Sidgwick, Keighley. Second, J. Jackson, Bury, Lancashire. Third, Messrs. Ashton & Booth, Mottram, near Manchester. Highly Commended, Rev. W. Serjeantson, Shrewsbury; J. Munn; G. Lingard, jun.

HAMBURG (Golden-pencilled).—Cocks.—First, H. Beldon. Second, J. Preston, Allerton, near Bradford, Yorkshire. Third, F. D. Mort, Moss Pit House, near Stafford. Fourth, Rev. R. C. Roy, Stavely, Chesterfield. Highly Commended, F. Pittis, jun., Newport, I.W.; Miss S. Cotes, Newport, Salop; W. Parr, Patricot, near Manchester; T. Wrigley, jun., Middleton, near Manchester. Commended, W. Parr; J. Wild, Ashton-under-Lyne.

HAMBURG (Golden-pencilled).—Hens or Pullets.—First, F. D. Mort. Second, H. Beldon. Third, Rev. W. Serjeantson. Fourth, F. Pittis, jun. Commended, W. Parr.

HAMBURG (Silver-pencilled).—Cocks.—First, Rev. T. O'Grady, Ashbourne, Derbyshire. Second, T. Hanson, Keighley. Third, E. Aykroyd, Gillingham Road, near Bradford. Highly Commended, Messrs. W. & J. Bairstow, Bingley, Yorkshire; F. Pittis, jun.; H. Beldon.

HAMBURG (Silver-pencilled).—Hens or Pullets.—First, J. Preston. Second, J. E. Powers, Biggleswade, Beds. Third, Rev. T. O'Grady. Highly Commended, J. Robinson; E. Aykroyd; Messrs. W. & J. Bairstow.

HAMBURG (Golden-spangled).—Cocks.—First, G. Walters, Worcester. Second, E. Brierley, Heywood, Manchester. Third, W. A. Hyde, Hurst, Ashton-under-Lyne. Fourth, J. Dixon, Clayton, Bradford. Highly Commended, J. Roe, Hadfield, near Manchester; W. A. Hyde. Commended, H. Pickles, jun., Earby, Sipton; J. Chadderton, Hollinwood, near Manchester; E. Brierley.

HAMBURG (Golden-spangled).—Hens or Pullets.—First, W. A. Hyde. Second, Messrs. S. & R. Ashton. Third, J. Rowe. Fourth, J. Chadderton. Highly Commended, J. Chadderton; I. Davies, Earborne, near Birmingham; Rev. C. Palmer, Lighthorne, Warwick. Commended, H. Beldon.

HAMBURG (Silver-spangled).—Cocks.—First and Cup, H. Beldon. Second, J. Fielding, Manchester. Third, Mrs. Hunt. Fourth, Miss Hunt, Littleover, Derby. Fifth, Messrs. Robinson & Fawcett, Baildon. Highly Commended, Messrs. Ashton & Booth, Mottram; J. Preston, Allerton, near Bradford; W. A. Taylor, Manchester; J. M. Kilvert, Ludlow; H. Loe, Appuldurcombe. Commended, Mrs. Hunt; Messrs. Robinson & Fawcett; T. Hanson, Keighley; H. Loe; J. Robinson, Garstang; Rev. F. Tearle.

HAMBURG (Silver-spangled).—Hens or Pullets.—First, J. Fielding. Second, H. Pickles, jun. Third, H. Beldon. Fourth, W. A. Taylor. Fifth, J. Wild, Ashton-under-Lyne. Highly Commended, Miss M. L. Wakeman; J. Fielding, Newchurch. Commended, Messrs. Ashton & Booth; F. H. Neville, Edgaston, Birmingham.

POLISH (Black with white crests).—Cocks.—First, R. Charlesworth. Second, Mrs. E. Proctor, Hull. Third, P. Unsworth. Highly Commended, T. P. Edwards, Lyndhurst.

POLISH (Black with white crests).—Hens or Pullets.—First and Commended, T. P. Edwards. Second, P. Unsworth. Third, Mrs. Proctor.

POLISH (Golden).—Cocks.—First and Third, R. P. Williams, Glaslenn. Second, W. Silvester.

POLISH (Golden).—Hens or Pullets.—First, Second, and Third, W. Silvester, Sheffield.

POLISH (Silver).—Cocks.—First, G. C. Adkins. Second and Third, P. Unsworth. Highly Commended, J. Heath, Nantwich. Commended, H. Beldon; G. C. Adkins.

POLISH (Silver).—Hens or Pullets.—First, Second, and Third, G. C. Adkins.

ANY OTHER DISTINCT VARIETY.—Cock and One Hen.—First, Countess of Aylesford (Cuckoo Dorking). Second, T. Walmesley (Buff Polish). Third, F. W. Zarhorst (Sultans). Fourth, Rev. J. C. Macdonald, Liverpool (African Guinea Fowl). Highly Commended, H. Savile; Col. Stuart Wright. Commended, Hon. C. W. Finch, The Bury, Leamington; T. Walmesley.

GAME (Black-breasted Reds).—Cocks.—First, Rev. W. J. Mellor. Second, J. Mason. Third, J. Fletcher, Stonclough. Fourth, J. H. Wilson. Fifth, Rev. T. O'Grady, Ashbourne.

GAME (Black-breasted Reds).—Cockerels.—First and Cup, Rev. L. R. Jacob, Welshpool. Second, Rev. T. O'Grady. Third and Fifth, C. Chaloner. Fourth, F. J. Astbury, Manchester.

GAME (Black-breasted Reds).—Hens.—First and Fourth, G. Clements, Birmingham. Second, J. Halsall, Ince, near Wigan. Third, R. Swift.

GAME (Black-breasted Reds).—Pullets.—First, G. R. Smith, Scarborough. Second, J. Jackson. Third, E. Akroyd. Fourth, W. J. Pope.

GAME (Brown and other Reds, except Black-breasted).—Cocks.—First, Duke of Newcastle. Second, C. Chaloner. Third, J. Wood. Fourth, Rev. T. O'Grady. Highly Commended, J. Platt, Winsford; S. Matthew, Stowmarket; M. W. Stobart, Darlington.

GAME (Brown and other Reds, except Black-breasted).—Cockerels.—First and Cup, C. Chaloner. Second and Fourth, J. Wood. Third, T. Burgess. Highly Commended, T. Mason; T. Sales; R. Smith; J. Fletcher; G. Clements. Commended, M. T. Statter, Whitefield.

GAME (Brown and other Reds, except Black-breasted).—Hens.—First and Third, J. Wood. Second, J. Platt. Highly Commended, S. Harrop, Manchester; E. Aykroyd; G. Clements; M. Billing.

GAME (Brown and other Reds, except Black-breasted).—Pullets.—First

and Third, J. Wood, Wigan. Second, M. Billing, jun., Erdington, Birmingham. Highly Commended, Rev. L. R. Jacob, Llanfair, Welshpool; M. Billing, jun.; T. Mason, Green Ayre, Lancaster; G. F. Ward, Sproston Wood, Wrenbury, Cheshire; W. Whewell, Radcliffe, Lancashire; S. Matthew, Stowmarket, Suffolk; J. Wood; T. Statter; T. Mason; T. Burgess, Burley Dam, Whitechurch, Salop.

GAME (Duckwings, and other Greys and Blues).—Cocks.—First, W. Bradley, Worcester. Second, A. K. Briggs, Bradford, Yorkshire. Third, Duke of Newcastle. Highly Commended, T. J. Charlton, Bradford, Yorkshire; S. Matthew, Stowmarket, Suffolk; Col. W. Blackburne, Leamington; J. Halsall, Ince, near Wigan; J. Mason, Worcester; A. K. Briggs. Commended, T. T. Burman, Hockley Heath, near Birmingham; W. Bradley.

GAME (Duckwings, and other Greys and Blues).—Cockerels.—First, J. Halsall. Second, E. Aykroyd, Bradford, Yorkshire. Third, Rev. T. O'Grady, Hognaston Vicarage, Ashbourne, Derbyshire.

GAME (Duckwings, and other Greys and Blues).—Hens.—First, G. R. Smith, Scarborough. Second, J. Mitchell, Mosely, near Birmingham. Third, J. Halsall. Highly Commended, Rev. J. W. Mellor, Colwick Rectory, Nottingham.

GAME (Duckwings, and other Greys and Blues).—Pullets.—First, W. Bradley. Second, T. J. Charlton. Third, J. Halsall. Highly Commended, S. Matthew, Stowmarket, Suffolk.

GAME (Blacks and Brassy-winged, except Greys).—Cocks.—First and Second, R. Limbrick, Kenilworth.

GAME (Blacks and Brassy-winged, except Greys).—Hens or Pullets.—First and Second, R. Limbrick.

GAME (White and Piles).—Cocks.—First, T. West, St. Helen's, Lancashire. Second, Messrs. G. & C. Furness, Accrington, Lancashire. Commended, Rev. F. Watson, Kelsall, Essex.

GAME (White and Piles).—Cockerels.—First, T. West. Second, O. Pembrerton, Temple Row, Birmingham.

GAME (White and Piles).—Hens.—First, Rev. F. Watson. Second, R. Pashley, Worsnop.

GAME (White and Piles).—Pullets.—First, R. Scrimminger, Pailton, Lutworth. Second, Messrs. G. & C. Furness.

BANTAMS (Gold-laced).—First and Second, M. Leno, The Pheastries, Dunstable, Beds. Third, T. C. Harrison, Hull.

BANTAMS (Silver-laced).—First and Third, M. Leno. Second, Rev. G. S. Crawws, Crawws Marchard Court, Tiverton. Commended, T. C. Harrison; M. Leno.

BANTAMS (White, Clean-legged).—First, Messrs. S. & R. Ashton, Mottram, Cheshire. Second, Mrs. Dale, Scarborough. Third, W. A. Taylor, Manchester. Highly Commended, H. Draycott, Humberstone, near Leicester.

BANTAMS (Black, Clean-legged).—First, H. Draycott. Second, T. C. Harrison. Third, T. J. Charlton. Highly Commended, Messrs. S. & R. Ashton; T. Burgess, Yorkshire; S. Rhodes, Wyke, Normanton; A. K. Briggs.

BANTAMS (Any other variety, except Game).—First, T. Burgess (Pekin). Second, H. C. Woodcock, Rears by, Leicester (Japanese). Commended, H. Ashton, Prestwich, Manchester.

GAME BANTAMS (Black-breasted Reds).—First, R. Swift, Southwell, Notts. Second and Third, J. W. Morris, Rochdale, Lancashire. Fourth, H. Shumack, Southwell, Notts. Fifth, P. Unsworth, Lowton, near Newton-le-Willows, Lancashire. Highly Commended, Rev. W. J. Mellor; M. Leno; T. Burgess, Whitechurch, Salop; J. Anderson, Meigle, N.B.

GAME BANTAMS (Brown or other Reds, except Black-breasted).—First, T. Dyson, Halifax. Second, R. Swift. Highly Commended, Miss E. A. Crawford, Farnfield, Southwell, Notts; Rev. W. J. Mellor; T. Dyson, Halifax. Commended, J. J. Cousins, Chapel Allerton, near Leeds.

GAME BANTAMS (Any other variety).—First, J. Crosland, jun., Wakefield, Yorkshire. Second, H. Shumack. Third, W. F. Entwistle, Leeds. Highly Commended, J. Percival; G. Smith, Stavely, near Chesterfield.

GAME BANTAM COCKS (Black-breasted and other Reds).—First, J. Halsall. Second, J. W. Morris. Third, H. Shumack. Highly Commended, Rev. G. Raynor, Tonbridge, Kent; T. Whitaker, Melton Mowbray; F. J. Astbury, Encliffe, Prestwich, Manchester; E. Aykroyd; R. Charlesworth, Manchester; Rev. W. J. Mellor; J. Crosland, jun.; C. Parsons, West Haddon, Rugby.

GAME BANTAM COCKS (Any other variety).—First and Third, C. Anklard, Chesterfield. Second, H. Ashton, Prestwich, Manchester.

DUCKS (White).—First, Mrs. Seamons, Hartwell, Aylesbury, Bucks. Second, J. K. Fowler, Prebendal Farms, Aylesbury. Third, H. Jones, Dinton, Aylesbury, Bucks. Highly Commended and Commended, Mrs. Seamons.

DUCKS (Rouen).—First and Fifth, S. Shaw. Second, T. Statter. Third, J. Munn, Stacksteads, near Manchester. Fourth, W. V. Kearne, Gateacre, near Liverpool. Sixth, Messrs. Gunson & Jefferson. Highly Commended, J. Anderson; A. Woods, Sefton, near Liverpool; G. Swift, Fulford, Stone, Staffordshire; H. S. Stott, Rochdale; Messrs. Gunson & Jefferson; J. Dixon, Clayton, Bradford, Yorkshire. Commended, T. Bott, Woodlands, Elton, near Bury; G. Swift; H. Dowsett, Pleshey, Chelmsford.

DUCKS (Black East Indian).—First, Rev. W. Serjeantson, Acton Burnell Rectory, Shrewsbury. Second, J. M. Kilvert, Ludlow, Salop. Highly Commended, Rev. W. Serjeantson. Commended, Mrs. Hayne, Fordington, Dorchester; A. Fenton, Rochdale; Messrs. G. & C. Furness.

DUCKS (Any other variety).—First and Second, S. A. Wyllie, East Moulsey, Surrey. Highly Commended, Sir J. Morris, Elmsdale, near Wolverhampton; H. Saville, Ollerston, Notts; J. Dixon; W. H. Barker, Wem, Salop; T. T. Burman; E. Hutton, Pudsey, Leeds; T. C. Harrison.

GESE (White).—First, Mrs. Seamons. Second, J. Lycett, Stafford. Highly Commended, T. Statter; J. Lycett. Commended, B. Baxter, Sipton, Yorkshire.

GESE (White).—Goslings.—First, Mrs. Seamons. Second, S. H. Stott. Highly Commended, Rev. G. Hustler, Stillingfleet Vicarage, York; J. K. Fowler; Mrs. Seamons.

GESE (Grey and Mottled).—First, J. K. Fowler. Second, W. Lort, King's Norton, Birmingham. Highly Commended, Hon. Mrs. Colville, Lullington, Burton-upon-Trent.

GESE (Grey and Mottled).—Goslings.—First, J. K. Fowler. Second, J. Lycett. Highly Commended, Mrs. Seamons; J. K. Fowler; S. H. Stott. Commended, Rev. G. Hustler.

TURKEYS.—First, J. Smith, Breder Hills, Sedgbrook, Grantham. Second, Mrs. Dale, Scarborough. Third, Rev. W. J. Mellor. Fourth, J. N. Beasley, Brampton, Northampton. Highly Commended, T. L. Fellowes, Honingham, Norwich; W. Winterton, Hinchley. Commended, J. Smith.

TURKEYS.—*Poults.*—First and Third, J. Smith. Second, T. L. Fellowes. Fourth, Lady E. Isham, Northampton. Highly Commended, Sir R. J. Clifton, Bart., Nottingham; W. Wykes, Wolvey, Hineckley; Lady E. Isham; Mrs. C. Browne, Withington, near Shrewsbury; E. Ryder, Harrytown, Stockport; H. Humphrey, Worthing, Sussex. Commended, W. Winterton.

PIGEONS.

Almonds were very good, and, if we mistake not, were the Bristol prize birds. *Carrier* cocks (Black), were a very strong class, in which there were many very good birds. *Dan Carrier* cocks were also a good class. Black and *Dan Carrier* hens were the best as a whole I have seen, though the first-prize Black hen has seen better days, and is evidently showing signs of old age. Carriers of any other colour contained some good Blues and Silvers, especially the hens.

Pouter cocks, Red or Blue, were also very well represented, the first-prize bird being a very large and lengthy bird, but without the grace and symmetry of the second-prize bird of Mr. Volckman's. For *Pouter* cock of any other colour the first prize went to a very lengthy and good White bird of Mr. Bulpio's, and the second prize to a good Black belonging to Mr. Roys. In *Pouters*, Red or Blue (hens), Mr. Horner won with a very showy Blue hen, closely pressed by Mr. Stewart. *Pouter* hens of any other colour were a very superior class; Mr. Fulton being first with a very good White, Mr. Roys again being second with a very good Black. The whole of the *Pouters* were above the average.

For *Balds* Mr. Roys was first with a very good pair of Blacks, and second with Yellow. *Beards*, Mr. Oates was first with very pretty birds, and Mr. Roys second.

In *Mottled Tumblers* the prizes went to very good Blacks, and the first prize for any other colour to very good self-coloured Yellows, Reds being second. Both lots were very neat.

Runts were not so good as last year, and no question if ever last year's weight will be attained.

Yellow *Jacobins* were not so good as usual, but in the class for any other colour there were some very good and well-triomed birds.

White *Fantails* were well represented as regards tail, but not so snake-like in the head as we should like to see many of them. The first prize for Any other colour went to a very good pair of Blues.

Among *Mottled Trumpeters* were some very good birds, Mr. Shaw having to be content with third honours after for several years taking first. The class for *Trumpeters* of any other colour also contained very good birds, superior to the *Mottled* in hoods and rose, many of them.

Foreign *Owls* were a very good but not large class, containing many previous prize winners. English *Owls*, a new class, contained some very good birds, especially the prize Blues, and the second prize, very delicate powder Blue.

The first prize for *Nuns* went to a very good pair of Blacks, and the second prize to a good pair of Yellows.

In the class for *Turbits*, Red or Yellow, Mr. Shaw was first with a pair of very good bright Reds. For *Turbits* of any other colour, Mr. Bulpio was first with Blues, Mr. Yardley being second and Mr. Shaw third with Silvers.

Black *Barbs* were the best class we have ever seen at Birmingham, though not quite so numerous as at Bristol, many of the birds there fighting the battle over again, the prize going to Capt. Henton of Cochin notoriety, for a very good pair, though we thought the cock a little coarse. The class for Any other colour introduced us to Mr. Thackray's Yellows, looking rather jaded. The second prize went to Mr. Wiltshire's Yellows, though the Rev. W. J. Mellor pressed closely on his heels with a very superior Red cock, but the hen did not match him in colour.

Dragoons were a very superior lot, Mr. Crossley winning in Blues, though we liked Mr. Jones Percivall's quite as well, the former being a trifle coarse. In Yellows Mr. Ludlow was first, and Mr. Esquilant second, with good birds. In Any other colour Mr. Percivall was first with a very good pair of Silvers, Mr. Yardley being second.

Among *Magpies* were many very good birds.

In *Antwerps* were many strong and good birds, but not well matched. *Archangels* we liked very well, and thought the second equal to the first prize.

Swallows were also a very good class, containing many very beautiful birds of that very pretty variety. The Any other variety class was a show of itself, and the Judges, we doubt not, could have easily distributed double the number of prizes.

This was the largest Show ever held at Birmingham, and it is no wonder that the Judges called in the assistance of Mr. Hedley, who generously consented to withdraw his very excellent Carriers and Barbs from competition.

CUP FOR GREATEST NUMBER OF PRIZES IN PIGEONS—E. E. M. Roys. Greenhill, Rochdale.

TUMBLERS (Almond).—First, F. T. Wiltshire, West Croydon. Second, R. Fulton, Deptford. Third, E. E. M. Roys. Highly Commended, J. Ford, Monkwell Street, London, E.C. Commended, R. Fulton.

CARRIER (Black).—*Cocks.*—First and Second, F. Crossley, Eiland, Halifax. Third, T. Colley, Sheffield. Highly Commended, E. E. M. Roys. Commended, T. Colley.

CARRIER (Dun).—*Cocks.*—First and Second, R. Fulton. Highly Commended, E. E. M. Roys. Commended, Rev. W. J. Mellor, Colwick Rectory, near Nottingham; T. Colley; R. Fulton.

CARRIER (Black).—*Hens.*—First, Second, and Third, F. Crossley.

CARRIER (Dun).—*Hens.*—First, E. E. M. Roys. Second, R. Fulton. Highly Commended, F. Elze, Bayswater, London. T. Colley; F. Crossley. Commended, E. Horner, Harewood, Leeds.

CARRIERS (Any other colour).—First, R. Fulton. Second, J. C. Ord, Pimlico, London. Highly Commended, J. C. Ord.

POUTERS (Red or Blue).—*Cocks.*—First, A. H. Stewart, Harborne, near Birmingham. Second, W. Volckman, Bishopsgate Street Within, London. Third, E. E. M. Roys. Highly Commended, F. Crossley; H. Yardley, Birmingham; C. Cowburn, Calls, Leeds. Commended, W. Volckman.

POUTERS (Any other colour).—*Cocks.*—First, C. Bulpin, Bridgewater, Somerset. Second, E. E. M. Roys. Third, R. Fulton. Highly Commended, W. Volckman. Commended, E. E. M. Roys.

POUTERS (Red or Blue).—*Hens.*—First, E. Horner. Second, A. H. Stewart. Third, W. Volckman. Highly Commended, R. Fulton; F. Crossley.

POUTERS (Any other colour).—*Hens.*—First, R. Fulton. Second, E. E. M. Roys. Third, A. H. Stewart. Highly Commended, W. R. Rose, Cranley Hall, near Kettering; W. Harvey, Sheffield; E. E. M. Roys. Commended, W. Rose; W. Volckman.

BALDS.—First and Second, E. E. M. Roys.

BEARDS.—First, W. H. C. Oates, Newark, Notts. Second, E. E. M. Roys. **TUMBLERS** (Mottled).—First, E. E. M. Roys. Second, A. H. Stewart. Highly Commended, R. Fulton. Commended, E. E. M. Roys.

TUMBLERS (Any other colour).—First, R. Fulton. Second, J. Thackray, York. Highly Commended, E. E. M. Roys. Commended, J. Ford.

RUNTS.—First, Second, and Third, T. D. Green, Saffron Walden, Essex. Commended, J. Baily, jun., 113, Mount Street, London, W.

JACOBINS (Yellow).—First, T. Kidpath. Second, E. E. M. Roys. Highly Commended, E. Horner. Commended, C. Bulpin.

JACOBINS (Any other colour).—First, E. E. M. Roys. Second, S. Shaw. Commended, E. Horner; E. E. M. Roys.

FANTAILS (White).—First, J. W. Edge. Second, J. Thackray. Third, Messrs. T. C. & E. Newbitt. Highly Commended, H. Yardley.

FANTAILS (Any other colour).—First, H. Yardley. Second, J. F. Breward. Highly Commended, F. H. Paget; H. Yardley.

TRUMPETERS (Mottled).—First and Second, E. Horner. Third, S. Shaw. Highly Commended, W. H. C. Oates; E. Horner.

TRUMPETERS (Any other colour).—First, E. Horner, Harewood, Leeds. Second, W. H. C. Oates, Newark, Notts. Third, S. Shaw, Stainland, Halifax. Highly Commended, J. Thackray, York; Rev. W. J. Mellor, Colwick Rectory, near Nottingham. Commended, E. Horner.

OWLS (Foreign).—First and Second, E. E. M. Roys, Rochdale. Highly Commended, J. Fielding, jun., Rochdale; F. Crossley, Halifax, Yorkshire. Commended, E. Horner; Messrs. T. C. & E. Newbitt, Epworth, near Bawtry.

OWLS (English).—First, T. Burgess, Brighouse, Yorkshire. Second, F. Esquilant, Brixton, London. Highly Commended, C. Bulpin, Bridgewater, Somerset. Commended, C. Bulpin; E. E. M. Roys.

NUNS.—First, C. Bulpin. Second and Third, E. Horner. Highly Commended, E. E. M. Roys. Commended, Rev. A. G. Brooke, Rynaton XI. Towns, Salop.

TURBITS (Red or Yellow).—First, S. Shaw. Second, H. Mapplebeck. Third, J. Thompson, Buzley, Yorkshire. Highly Commended, S. Shaw. Commended, F. Waitt, Sparkbrook, Birmingham.

TURBITS (Any other colour).—First, C. Bulpin. Second, H. Yardley. Third, S. Shaw. Highly Commended, E. Horner; Messrs. T. C. & E. Newbitt. Commended, E. Horner.

BARBS (Black).—First, Capt. H. Heaton, Manchester. Second, E. E. M. Roys. Third, J. Firth, jun., Dewsbury. Highly Commended, F. T. Wiltshire, West Croydon, Surrey; Capt. H. Heaton.

BARBS (Any other colour).—First, J. Firth, jun. Second, F. T. Wiltshire. Highly Commended, Rev. W. J. Mellor. Commended, Capt. H. Heaton; E. Horner.

DRAGOONS (Blue).—First, F. Crossley. Second, J. Percivall. Highly Commended, S. Shaw; J. W. Ludlow, Birmingham. Commended, H. Yardley.

DRAGOONS (Yellow).—First, J. W. Ludlow. Second, F. Esquilant. Highly Commended, F. T. Wiltshire; C. Bulpin.

DRAGOONS (Any other colour).—First, J. Percivall. Second, H. Yardley. Highly Commended, J. W. Edge; S. Shaw. Commended, E. Pigeon, Lymington, near Exeter.

MAGPIES.—First, T. Burgess. Second, E. E. M. Roys. Third, S. Shaw. Highly Commended, E. Horner. Commended, T. Martin, Manchester.

ANTWERPS.—First, J. W. Ludlow. Second and Third, H. Yardley. Highly Commended, J. Mitchell, Moseley, Birmingham; J. W. Ludlow. Commended, H. Noyé, Birmingham; E. Hutton, Padsey, Leeds.

ARCHANGELS.—First, C. Cowburn, Calls, Leeds. Second, H. Mapplebeck. Third, H. Yardley. Highly Commended, J. E. Breward, Coventry; J. Entwistle, Birmingham.

SWALLOWS.—First, E. Horner. Second, F. H. Paget, Birstall, Leicester-shire. Third, S. Shaw. Commended, H. Yardley.

ANY OTHER NEW OR DISTINCT VARIETY.—First, J. Baily, jun., Mount Street, London, W.; E. E. M. Roys. Second, F. H. Paget; H. Yardley. Highly Commended, F. H. Paget; J. Baily, jun.; E. E. M. Roys; H. Noyé. Commended, F. Waitt.

JUDGES.—*Poultry.*—Rev. R. Palleine, Kirby Wisk, Thirsk; Mr. J. Baily, Mount Street, Grosvenor Square, London; Mr. J. Hindson, Barton House, Everton, Liverpool; Rev. G. F. Hodson, North Pether, ton, Bridgewater; Mr. R. Teehay, Fulwood, near Preston; J. H. Smith, Esq., Skelton Grange, York; and J. P. Smith, Esq., Wick, Worcester. *Pigeons.*—Mr. Harrison Weir, 9, Lyndhurst Road, Peckham, London; Mr. W. B. Tegetmeier, London; and Mr. Hedley, Claremont, Redhill, Surrey.

CHIPPENHAM POULTRY SHOW.

The little town of Chippenham manages still to keep up its Poultry Exhibition, as an adjunct to the Agricultural Show, indeed in 1865 and 1866, although it was forced to give up the latter portion, it still retained the poultry. This year, the poultry, although more numerous than on any other occasion, was obliged, by the addition of the cattle, to retreat in some degree into the inner room, where the light is far from good. The pens were ranged tier over tier, so that both seeing and judging were no easy tasks. Altogether about 140 pens were entered, and this is about the outside number that can be accommodated.

The *Dorkings* headed the list, the first prize cock, otherwise very fair, had quite a spriggy comb at the posterior portion, many of the birds were useful specimens. The *Game* had the largest entry, but excepting the noticed pens, there was not any great merit. In *Spanish* Mr. Heath was first with a good pen, Mr. Hulbert, second, also with a fair pen; the entries, however, were few. Of *Cochins* there was a good entry, Miss Milward, was first with a beautiful pair of Buff birds, and Mr. Stephenson, second with Partridge not yet at their best. Mr. Phillips's Partridge, highly commended, was also a very good pen. Of *Brahmas*, only the second year of their having a class, there were ten entries, but only the winning pens were noticed; the quality was by no means first-rate, one pen of light birds had scarcely a vestige of leg feathering. *Hamburghs*—There was a good entry of Pencilled; the same may be said of the Spangled. The latter were the better class; one or two of the combs cooked, as we recommended a few weeks back, would have made a meal. A coarse comb is very objectionable in these breeds. The earlobe appeared to have decided the prizes, the look of the first prize Golden-spangled cock's tail did not please us. Of *Polands* there were four entries; Mr. Hinton, was first and second with Silvers. The first prize *Game Bantams* travelled from Wales. In the "Any other variety" of Bantams, there was a good pen of Sebrights. *Crève Cœurs* were first, and Malays second, in the Any other variety class; both were good. In Cross-bred birds, *Brahmas*, and *Dorkings* carried off both prizes, but the birds were smaller than we think cross-breeds ought to be.

Of *Turkeys*, the three entries were all good; of *Geese* there was a large entry, but nothing very extraordinary; and of *Rouen Ducks*, an excellent entry. Both prizes were taken by Mr. Hulbert easily. Sweepstakes for Game Cocks, did not bring so many birds together as usual. In the Extra Class were a couple of Peacocks. The arrangements was as good as possible under the difficulties of space.

DORKINGS.—First, F. Baily, Calne. Second, G. Hanks, Malmesbury. **SPANISH.**—First, A. Heath, Calne. Second, J. W. W. Hulbert, Chippenham.

GAME (Black-breasted and other Reds).—First and Highly Commended, — Stagg, Netheravon. Second, — Waller, Calne.

GAME (Any other variety).—First, G. Hanks. Second, Rev. C. M. Perkins, Badminton.

COCHINS.—First, Miss Milward, Newton St. Loe. Second, H. K. Stephenson, Weston-super-Mare. Highly Commended, F. G. Phillips, St. Leonard's-on-Sea.

BRAHMAS.—First and Second, J. Hinton, Hinton, near Bath.

HAMBURGHS (Gold or Silver-pencilled).—First, G. Brinkworth, Chippenham. Second, — Powney, Hilmarton. Highly Commended, Rev. H. Mullens, Acton Turville.

HAMBURGHS (Gold or Silver-spangled).—First, — Maggs, Tetbury. Second, J. W. W. Hulbert.

POLANDS.—First and Second, J. Hinton.

GAME BANTAMS.—First, E. Phillips, Brecon, Wales. Second, E. Cambridge, Bristol.

BANTAMS (Any other variety).—First, Messrs. Tonkin & Tuckey, Bristol. Second and Highly Commended, Miss Garland, Weston Birt.

ANY OTHER DISTINCT BREED.—First, — Wyndham, Ufford. Second, J. Hinton.

CROSS-BREDS.—First and Second, J. Hinton.

TURKEYS.—First, H. Brinkworth, Corsham. Second, I. Smith. Highly Commended, Miss Milward.

GESE.—First, — Say, Lacock. Second, G. Hanks.

DUCKS (Rouen).—First and Second, — Hulbert.

DUCKS (Aylesbury).—First, G. Hanks. Second, — Bennett, Yate.

DUCKS (Any other variety).—First, Rev. H. Mullens. Second, Miss Boode, Lucknam.

SWEETSTAKES FOR THE BEST GAME COCK.—First, — Thompson, Hilmarton. Second, G. Hanks. Third, — Stagg, Netheravon.

The Judge was John R. Rodbard, Esq., of Aldwick Court, Winton.

OAKHAM POULTRY SHOW.

It was originally intended to hold this year's meeting in the Riding School, Oakham, but the number of entries was so much greater than anticipated by the managing Committee, that they were compelled to abandon the Riding School altogether, and adopt a tent of 200 feet in length by 40 feet in width in its stead. The appearance of the Show, which took place on the 28th ult., was satisfactory under the new arrangement, but from some misunderstanding, the erection of the pens was so long delayed, that several hours of daylight were lost before the judging could be commenced.

In *Dorkings* the Show was very successful, most of the birds being of the highest character, and nearly one hundred pens of this variety alone competed. The White *Dorkings* were far superior to those of late shows, and the classes for *Spanish*, although some few pens were still moulting, were decidedly good. Of *Cochins* there was a very good display, but the *Brahmas* were sadly deficient throughout. Of *Hamburghs* the Silver-spangled variety was numerously and well shown. Among *Game* and *Game Bantams*, a few very good pens were shown, but for the most part the birds were not equal to some of these exhibited in previous years. The Sebright Bantams certainly formed a very pretty collection, and added materially to the general attractiveness of the Show. Large numbers of "cross-bred" poultry were shown, and most excellent table fowls they evidently were, but they appeared to excite little interest as compared to the pure breeds.

The division of the tent, appointed to *Ducks*, *Geese*, and *Turkeys* was excellently filled, as was that appropriated to the *Pigeons*. The error of placing the latter so high up, will be avoided at future meet-

ings. The weather was lovely, and the Show was in all respects successful.

DORKINGS (Any colour, except White).—*Cock*.—First, D. C. Campbell, M.D., Brentwood. Second, R. Wood, Clapton. Third, C. Speed, Horn Mills. Fourth, J. Smith, Breder Hills, Grantham. Highly Commended, W. Fowler, Manton; H. Warner, the Elms, Loughborough; J. Longland; D. C. Campbell, M.D. Commended, R. Parlett. *Hens or Pullets*.—First, J. Longland. Second, G. Clarke, Leeg Sutton. Third, D. C. Campbell, M.D. Fourth, Rev. E. Alder, Etwell, Derby. Highly Commended, R. Wood; J. Longland; D. C. Campbell, M.D.; B. Jarvis, Mansfield; H. Warner; Marchioness of Exeter, Burghley; E. S. Tiddeman, Childerich Vicarage, Breetwood; H. Lingwood, Needham Market, Suffolk; Mrs. Dale, Scarborough; J. K. Fowler, Prebendal Farm, Aylesbury; J. Smith. Commended, D. C. Campbell, M.D.; Hon. W. H. W. Fitzwilliam; C. Speed.

DORKINGS (White).—*Cock*.—First, H. Lingwood. Second, Mrs. Syson, Empingham. Third, Marchioness of Exeter. *Hens or Pullets*.—First, H. Lingwood. Second and Highly Commended, Mrs. Syson. Third, Mrs. Dale.

SPANISH.—*Cock*.—First, J. Walker, Wolverhampton. Second, F. James, Peckham Rye, Surrey. Third, E. Brown, Sheffield. Highly Commended, A. Houghton, Melton Mowray; O. Drewry, M.D., Walsall. Commended, Rev. W. J. Mellor, Colwick Rectory, Nottingham. *Hens or Pullets*.—First, O. Drewry, M.D. Second, J. Walker. Third, F. James. Commended, A. Houghton; J. Cleves, Walsall; E. Brown.

COCHINS (Cinnamon, Buff, or Partridge).—*Cock*.—First, H. Lingwood, Bucklesham, Woodbridge. Second, B. Jarvis. Third, H. H. Crewe, Highly Commended, W. Turner, St. Mary Elms, Ipswich. Commended, J. Longland. *Hens or Pullets*.—First, T. M. Derry, Gedgey. Second, H. Lingwood. Third, Col. Stuart Wortley, Grove End Road, London. Highly Commended, Rev. W. J. Mellor; J. M. Wellington, Oakham; Marchioness of Exeter; B. Jarvis; W. Kirk, Wymondham; Mrs. T. J. Paget; J. M. Wellington. Commended, H. H. Crewe; H. Lingwood.

COCHINS (White or Black).—*Cock*.—First, O. Drewry, M.D. Second, Mrs. J. Clarke, Bedford. Third, Mrs. Williamson. Commended, H. J. Godfrey, Hammersmith. *Hens or Pullets*.—First, G. Lamb, Compton. Second, R. Chase, Birmingham. Third, Mrs. Williamson, Queerborough Hall. Highly Commended, Mrs. J. Clarke. Commended, H. J. Godfrey, Hammersmith, London; Rev. C. H. Lucas, Edithweston Rectory; J. Gardiner, Bristol.

BRABMA POOTRA (Any colour).—*Cock*.—First, G. Turner, Uppingham. Second, A. H. Verity, Northende, Cheshire. *Hens or Pullets*.—First, G. Turner. Second, G. W. Harrison, Spalding.

HAMBURGHS (Silver-spangled).—*Cock*.—First, A. Houghton. Second, J. Preston, Allerton, Yorkshire. Commended, Messrs. S. & R. Ashton, Mottram, Cheshire. *Hens or Pullets*.—First, A. Houghton. Second, H. Warner. Commended, Messrs. S. & R. Ashton.

HAMBURGHS (Silver-pencilled).—*Cock*.—First, T. Fawcett, jun., Northgate, Baldon. Second, J. Houghton, Ashfordy. *Hens or Pullets*.—First, J. Preston, Allerton, Yorkshire. Second, A. Croasbie, Galtoside, Melrose.

HAMBURGHS (Gold-spangled).—*Cock*.—First, T. Walker, jun., Denton. Second, A. Houghton. *Hens or Pullets*.—First, T. Walker, jun. Second, J. F. Loversidge, Newark. Highly Commended, T. Blakeman, Tettenhall.

HAMBURGHS (Gold-pencilled).—*Cock*.—First, Miss Wiggfield, Ticken-cote Hall. Second, J. Preston, Allerton, Yorkshire. *Hens or Pullets*.—First, A. Houghton. Second, Withheld.

GAME (Red and other Dark colours).—*Cock*.—First, E. A. Aykroyd, Bradford. Second, H. Warner. Third, Capt. Withall, Loddington. Highly Commended, J. Smith, Grautham; Mrs. Fludyer, Ayston Hall. Commended, H. Warner; Mrs. Fludyer; R. Pashley, Worksop. *Hens or Pullets*.—First, E. Jarvis, Mansfield. Second, Capt. Withall. Third, J. Smith. Extra, Hon. W. H. W. Fitzwilliam. Highly Commended, J. Smith; W. T. Everard, Alton Grange; H. Warner; Mrs. Fludyer.

GAME (White, Piles, and Light colours).—*Cock*.—First, E. Jarvis, Mansfield. Second, Mrs. Fludyer. Third, W. Frith, Chesterfield. Highly Commended, E. Pashley. *Hens or Pullets*.—First, W. T. Everard. Second, R. Swift, Southwell. Third, T. Dyson, Halifax.

BANTAMS (White, Clean Legs).—First and Second, H. Draycott, Hamberstone. Highly Commended, H. L. Bradshaw, Wakerley.

BANTAMS (Black, Clean Legs).—First and Highly Commended, H. Draycott. Second, A. Stortar, Peterborough.

BANTAMS (Gold-laced).—First, Lady Berners. Second, T. C. Harrison, Hnll.

BANTAMS (Silver-laced).—First, T. C. Harrison. Second, G. W. Boothby, Louth. Highly Commended, H. Draycott; J. Walker, Halifax.

GAME BANTAMS (Any colour).—*Cock*.—First, J. Adkins, Walsall. Second, D. C. Campbell, M.D. Third, W. Frith. Highly Commended, T. Whitaker, Melton Mowray; J. Parlett, Huntingdon; H. Warner; Capt. Withall; Rev. G. Raynor, Tonbridge. Commended, J. H. Poiton. *Hens or Pullets*.—First, J. M. Wellington. Second, E. S. Tiddeman. Third and Highly Commended, J. Parlett. Commended, M. Kew, Market Overton; T. Dyson.

BANTAMS (Any other distinct variety).—First, T. C. Marshall, Peterborough. Second, H. Woodcock, Rearsby. **CROSS-BRED CHICKENS.**—First and Fourth, M. Kew. Second and Third, J. Longland.

ANY OTHER DISTINCT VARIETY.—First, G. W. Boothby, Extra Prize, F. H. Paget, Birstall; R. Pashley. Second, B. Jarvis. Highly Commended, Col. Stuart Wortley; T. C. Marshall, Peterborough; G. W. Boothby.

TURKEYS (Any colour).—*Cock*.—First, E. Leech, Rochdale. Second, Mrs. Berridge. Third, J. Smith. Highly Commended, Marchioness of Exeter; G. Turner; F. E. Richardson, Bramshall; W. Kirk, Wymondham. *Hens*.—First, F. E. Richardson. Second, J. Smith. Third, E. Leech.

DUCKS (White Aylesbury).—First, E. Leech. Second, J. W. Harrison, Spalding. Third, Warner & Sons, Leicester. Fourth, J. Clarke, Bedford. Highly Commended, J. Hornsby, Grantham.

DUCKS (Rouen).—First, E. Leech. Second, R. Wood, Clapton. Third, J. Longland. Fourth, C. Sidwick, Keighley. Highly Commended, F. Parlett, Great Baddon; E. W. Berry, Sutton.

DUCKS (East Indian, Mandarin, Carolina, Wild, or any other Distinct Breed not mentioned before).—First, Mrs. Berridge, Enley on the Hill. Second, Rev. C. H. Lucas. Third, Lady Hazlerigg, Noseley Hall. Highly Commended, Mrs. Clarke, Bedford.

DUCKINGS (Cross-bred, or Common).—First and Third, Withheld. Second, Mrs. Berridge.

GESE (White).—Prize, G. R. Pearson, Witham Common. *Goslings*.—First, Mrs. Berridge. Second, J. K. Fowler.

GREEN (Grey or Mottled).—First, Rev. C. H. Lucas. Second, J. K. Fowler. Highly Commended, G. Cooper, Seagrave; T. Hardy, Crowland. *Goslings.*—First and Highly Commended, T. Hardy, Crowland. Second, Rev. C. H. Lucas.

PIGEONS.

TUMBLERS.—First, P. H. Jones, Fulham. Second, H. Headley, Leicester. Highly Commended, G. Sturgess, Leicester; J. E. Beward, Coventry; Messrs. T. C. & E. Newbitt, Epworth. Commended, A. Storrar, Peterborough.

CARRIERS.—First and Second, G. Sturgess. Highly Commended, A. Storrar; J. E. Beward; E. Walker, Leicester.

POUTERS.—First and Second, W. R. Rose, Cranley Hall. Highly Commended, H. L. Bradshaw, Wakerley; H. Draycott; J. E. Beward; G. Sturgess; Messrs. T. C. & E. Newbitt.

JACOBIANS.—First and Highly Commended, G. Sturgess. Second, P. H. Jones.

FANTAILS.—First, H. Headley. Second, F. H. Paget. Highly Commended, J. E. Beward; G. Sturgess.

TRUMPETERS.—First, E. Sheerman, Chelmsford. Second, Mrs. J. Thompson, Bigley. Highly Commended, Rev. W. J. Mellor, Colwick Rectory, Nottingham. Commended, H. Headley.

NOBS.—First, A. B. Bailey, Shooters Hill, Longton. Second, A. Crosbie. Highly Commended, H. Draycott.

TURBITS.—First, Mrs. J. Thompson. Second, A. Crosbie. Highly Commended, H. Draycott; F. H. Paget; G. Sturgess; P. H. Jones.

RUNTS.—First, H. Headley. Second, G. Sturgess.

ANY OTHER NEW OR DISTINCT VARIETY.—First, G. Sturgess (Ice Pigeons). Second, H. Draycott (Yellow Magpies). Extra Second, P. H. Jones (Yellow Horseman). Highly Commended, H. Draycott (Black Swallows); Rev. C. H. Lucas (Foreign Doves); F. H. Paget (Toys, and Blue Swallows); H. Headley (Fairies); G. Sturgess (Ice Pigeons, Isabells and Fairies); M. Kow (White Horsemen); P. H. Jones (White Barbs). Commended, H. Draycott (Brunnicks).

The Judges were T. Challoner, Esq., of Barlborough, Chesterfield; R. Hewitt, Esq., of Birmingham; and T. Tatham, Esq., of Kingshorpe, Northampton.

EXHIBITED FOWLS INJURED.

As one of the Committee of the late Bristol and Clifton Poultry Show, I cannot allow the letter of your correspondent "Bristol" to pass unanswered.

He says, "The annoyance, loss, and mortification felt and expressed by several exhibitors at this celebrated Show," &c. Now, with the exception of the one unfortunate pen of White Dorkings under notice, there was no bird injured at our Show. In regard to that particular pen, I am in a position to say that the cock's tail was out when he was taken from the basket, and that it must, therefore, have been plucked by some person while in transit to the Show.

I believe I can safely say that, with the exception of some errors in judging, which will always occur at large Shows such as the Bristol and Clifton, all the exhibitors who were present were highly pleased with the general management and arrangements of the Exhibition.

Respecting the remarks of the Editors—"That the Committee should supervise the penning and re-basketing of the birds"—I beg to say we not only did that, but ourselves actually penned and re-basketed the greater portion of the eight hundred pens entrusted to our care, so as, if possible, to prevent mistake or accident.—E. CAMBRIDGE.

MY POULTRY YARD.—No. I.

MISS WATTS in some of her notes on poultry tell us how she first commenced poultry-keeping. The way she began was something like my way, though she began with a cock and four hens, while I was obliged to begin with one pullet. Hers were given her—so was mine. I do not think hers were any especial breed, mine was a brown dunghill; but in both of us the same work was effected, both of us were smitten with the poultry mania, the foundation laid of love towards the beautiful birds which grace our poultry yards.

Now, I will briefly tell all about how I commenced poultry-keeping, and how I went on, and how my poultry are now, touching upon all the breeds which I have tried, and upon those which I have now.

I was only nine years old when I had my first pullet given to me—a pretty little brown pullet, as I have already said of the dunghill breed. I need scarcely say how delighted I was with it. It was committed to my father's poultry yard, in which were some twenty hens and two cocks of mixed breeds. We had no poultry house then, but the fowls slept in different trees that overshadowed the back door, generally Ilexes, and the hens used to lay in the wood-house, and in the stable, and very often in the hedges. I used all through the autumn and winter to feed my birds in some out of the way corner where no great

half-bred Cochin cock could come, giving them scraps from the breakfast table; and the winter months crept on till, at length, one of the servants with great glee showed me an egg, the produce of my pullet, and again was I delighted.

My pullet went on laying; I sold the eggs to my father for one halfpenny each (I sold them at such a moderate price because I did not buy the food), till at length she wanted to sit. She had eleven eggs placed under her, and all through those three weeks I never saw her. She sat in some out of the way place which I was not allowed to approach, but at length all my patience was repaid, for one day my mother led me to the kitchen and showed me eight little chickens. Again, I was delighted, and this time eight times more than before.

The summer months passed, and I soon beheld my eight chickens grow into large birds, four were condemned to the table for being ugly, but four were saved, a cock and three pullets.

Thus I began my poultry-keeping. Years sped onwards till at length, when I was fourteen, all the poultry belonged to me, as they have done ever since. My father gave up to me all his claims upon them, and I was the master of a much coveted poultry yard. I had a hen house built for my fowls to lay and roost in, and then I began to think of procuring some thoroughbred birds; my fowls had a splendid run over kitchen garden, fields, and woods—and the first thorough bred birds I obtained were some Silver-pencilled Hamburgs. I bought books and read all the poultry news in my father's papers, till at length I gained knowledge of the different breeds, and, as a consummation, took in THE JOURNAL OF HORTICULTURE and Poultry Chronicle.—R. S. S. W.

TREATMENT OF HATCHING DUCK'S EGGS.

YOUR correspondent "H. W., Halifax" (see page 321), complains that his Ducks die at hatching-time. Perhaps the eggs are kept too dry during incubation. I have a clean green turf placed at the bottom of the nest and short straw on the top. The eggs are sprinkled once or twice a week with warm water, and, when they are hatching, once, or even twice, a-day while the hen is off her nest. Thus treated they hatch very well.

Can you inform me why half-bred Brahma chickens are without grey feathers? I had a few for the table bred from a White Dorking cock and Dark Brahma hens. The chickens are mostly white, and some have a few red feathers, but the legs are generally feathered. It seems very strange that neither cockerels nor pullets resemble the Brahmas in colour.—A SUSSEX POULTRY-KEEPER.

BEE-KEEPING IN FIFESHIRE.

IN the beginning of this year I had two stocks in straw hives: No. 1, four years old, and weighing about 30 lbs. gross; and No. 2, one year old, and weighing 20 lbs.

No. 1, I wrought somewhat after the Stewarton or Ayrshire fashion. About the middle of May, as the bees were becoming numerous, I put a small 64-inch square box, with a small piece of guide comb into it, on the top of the stock skep, first taking out the pin (1½-inch diameter) in the top of the skep, to let the bees up into the box. In about ten days they went up, and seemed to quite fill it, hanging in clusters from the top of the box. In two days more I observed the comb half way down. These operations I saw through a small window in one side of the box. The weather becoming very hot the day after, and the bees beginning to lie out early in the morning, I immediately put an eke or breeding-box 13 inches by 13, and 6 high, under the skep, the box having openings in the top of it to allow the bees to pass down into it, and out through an opening in the floor-board, and in half an hour afterwards the bees were busy at work again, as on previous days, and continued to be so for about two weeks, when again they showed symptoms of lying out. I then put a second or medium-sized skep between the box and stock skep, and for two or three weeks afterwards the bees increased in numbers so much that I had to raise the under box on one side to let them out and in, the passage through the floor-board, 4 inches wide, apparently being too small to let them pass each other freely. I put down this stock (with chloroform) in September, and added the stupified bees to a skep I had bought. From the top box I obtained 6 lbs. of pure sealed comb, from the second skep about 10 lbs. of pure comb, nearly all sealed (this skep was only about half full of comb), and from the stock skep about 20 lbs. of run

honey. There was much refuse in this skep, as it weighed 45 lbs. gross, with floor-board.

Now for No. 2. From it I wanted a swarm or swarms to fill up an empty space in my bee-house. About the end of June it became very crowded, and a swarm came off it for three successive days, and always returned to it, when I was in the act of skeeping the bees. As I could not spare any more time watching and running after them, I put an eke or breeding-box below the stock skep. After that they worked vigorously, and being anxious to have some honey from them, and keep the spaces in the bee-house full, in September I tried to drive them, by reversing their skep, putting the second skep of No. 1 over them, and drumming upon them for twenty minutes or so, but although a very large portion of the bees went up, I next morning found the queen was still in the stock skep, and lost no time in setting the skep into which I tried to drive them alongside of it, and in less than ten minutes the bees had all left and joined the stock skep. I, therefore, bought another swarm from a neighbour to fill up the bee-house, and have left No. 2, as it is about 40 lbs. gross weight, for further operations on the Stewarton system next season.

Thus far I think I have had a good bee season this year, and hope the above rambling account of my apiary will be of interest to at least a few, if not all, your readers on bee matters.—P. K.

SILKWORM REARING IN ENGLAND.—No. 1.

I HAVE for many years taken much delight in collecting information about silkworm culture, and from several years' residence in Italy, have had much opportunity of studying many relative subjects. The cultivation of the mulberry tree best adapted for the English climate, and the variety suitable for the insect, have also had a share of my study, as well as the reeling off silk from the cocoons.

I believe that the production of silk will some day become an important branch of industry in this country. It may be some time before any great results or profit will arise to cultivators of silkworms; but if no beginning be made, no future benefit can be looked for. Plant no apple trees, grow no apples. Plant no mulberry trees, grow no silk.

Of all the breeds of the silkworm, that feeding on the mulberry leaf maintains a superiority. The Ailanthus worm, the Yama-mai or Oak worm, and the Canadian worm, eating plum leaves, all of which have been introduced to notice of late years, cannot compete with the more useful or mulberry worm, at least at present. The Yama-mai, or oak-leaf worm, may, however, be the most likely to become useful. I believe that many continental silkworm rearers have suffered severe loss from the "atrofia," or silkworm disease, but in many instances I am convinced much of the loss is to be traced to faults in the rearing. It is to be hoped that this fearful scourge is abating, and that the present importations of eggs from the east will restore the serical industry of Europe to its former life.

In the year 1856 I returned from Italy after a long residence there, and brought seeds of a certain mulberry grown in the alpine district of Piedmont, where the winters are as cold as, or colder than here. At different times I have had eggs of various breeds of the silkworm from the same source, and have made what I call very successful experiments. I have some of my trees raised from seed, which produce very large, fine, tender leaves. These plants have stood the test of several winters, and severe ones, too.

The reason this branch of industry has but partially succeeded in England certainly does not rest with the worms themselves; they come out of the eggs, even without artificial means, when the genial warmth of spring renders vegetation active, otherwise there might be very reasonable doubts on the subject. Many attempts at rearing silkworms have been made, but with indifferent success. What is the reason of these failures? Perhaps some persons will answer, "Because the English climate is too cold," or "the mulberry tree too delicate to produce sufficient leaves, on which depends the worm's sustenance." Doubtless many kinds of mulberry are tender, but there certainly exist some which are exceedingly hardy, and these alone should be planted. The kind generally used in England has been the black mulberry, mostly grown for its fruit, the leaves of which are not suitable for silkworms, unless when these are large and near spinning. Lettuce leaves would be almost as good, and are used by many, but the insect never does well when fed thereon. Such substitutes are only useful to persons feeding a few worms by way of amusement,

and beyond this very few think, because ignorant of any use or profit attached to it, or not desiring the trouble that might be necessary. Many see trouble where there is little.

There are mulberry trees which are quite hardy, as my own experiments prove. The variety I have raised from seed obtained at a Piedmontese "Gardino Botanico" is, certainly, very fine in all respects; but whether or not entitled to a new name, still most growers from seed like to give a name to their productions: therefore I call mine the Garibaldi mulberry. I would particularly notice that my small stock of plants took no harm from the severe frosts of 1860-61, although then very young and frozen down to the very roots, which I consider a sufficient guarantee of hardiness. The cultivation of this mulberry is easy, but judgment must be used both in pruning and gathering the leaves, or the tree must suffer and fall off in its produce.

When plantations of such a mulberry have been made, silkworm rearing can be begun in earnest. Amusement and profit will be combined.—LEONARD HARMAN, JUN.

OUR LETTER BOX.

BREEDING POWERS (Inquirer).—You need not be uneasy about your Cochon cock. There is no time lost. There is little difference between Brahmas and Cochins, either in size or laying. As a fowl of equal utility we give preference to the Brahma, but we repeat that there is little difference.

CROSS-BREEDING WITH THE HOUDAN (Subscriber).—We know no fowl you could use to cross with the Houdan. Our experience of it is, that it is very hardy, and an excellent layer. It is always a mistake to cross non-sitters with sitters. These latter keep on laying because they have nothing else to do; the former leave off because other duties press upon them. You will never succeed in getting constant layers; it is against nature. Take, for instance, the season of moulting. A bird cannot produce eggs and plumage at the same time. The cross you inquire about would unquestionably make a very ugly bird—inferior to the pure Houdan as regards laying, and to the pure Dorking for sitting and rearing chickens.

SELLING POULTRY (G. A.).—If you send your surplus stock to Mr. Stevens, King Street, Covent Garden, you will usually obtain their value. He has poultry auctions every fortnight.

PREPARING FOWLS FOR EXHIBITION (Poulet).—Where fowls can run about and keep themselves clean, we always advise they should do so, with the exception of Spanish, which are better for a day or two in confinement. They should only be washed once, and then carefully kept from dirt. Washing improves only the colour of the plumage, not the feather itself. Almost all the Brahma cocks have a brown patch on the wing; the absence of it is the exception. Rouen Ducks should be kept up a few days for the sake of weight if they are deficient in it, but as a rule we have seen none so good or so successful as those that have been taken off the water to go to an exhibition. It must be recollected that beauty of plumage is one of the essential points, and that is more easily gained when at liberty than when in confinement.

OUR REPORT OF PRICES (G. S.).—The prices quoted by the "reporter" in our journal are those of the London market, and any one who has sent Pheasants to London for sale will bear him out. It is, however, necessary to observe, you doubtless want the best, and they are not to be had at the lowest quotations. Mr. S. makes one mistake. If Pheasants cost 3s. and 3s. 3d. each, they cannot be sold at 3s. 6d. each to leave a profit, and they must indeed be cheap when worth only 3s. 6d. to retail. The prices we quote are wholesale. They are paid for large numbers. Considerable addition must be made to them before the retail price is arrived at.

BRINDLEY'S INCUBATOR.—"A Subscriber" wishes to know, from some one who has tried Brindley's Patent Incubator, whether it is easy to manage. "A Subscriber" has one of the artificial mothers, which he finds answers admirably.

CANARIES—PIGEONS TRESPASSING (Trotters).—The Canary dropping dead from the perch, with blood flowing from its beak, had ruptured a blood-vessel. We cannot discern the cause, knowing nothing of the antecedents. March is a good time for pairing Canaries, but it may be in February, if you have a warm place in which they are constantly kept. You are liable to a penalty of £2 over and above the value of the bird, if you "kill or wound" any "house dove or Pigeon." Your remedy is in the County Court for any damage a Pigeon does to you.

REMOVING BEES (A Notice).—If the floor-board is moveable the entrance should be closed by means of perforated zinc, and the bees conveyed carefully by hand to their new location. If on the other hand, the floor-board is a fixture, the hive should be lifted off from it and tied up in a piece of cheesecloth, when it may be transported to its destination in the same manner.

GAEF'S HIVES (C. A. J.).—We do not know the maker's address, but P. Crowley, Esq., Culverton House, Alton, Hants, would forward a letter to him, probably, if you enclosed one in an envelope addressed to that gentleman. There is no seed in the heads of Pampas Grass you sent.

POULTRY MARKET.—DECEMBER 4.

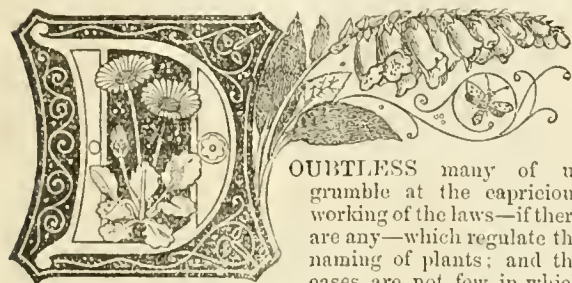
	s.	d.		s.	d.		s.	d.		s.	d.
Large Fowls.....	2	6	to	3	0	Pheasants	2	0	to	2	6
Smaller do.....	2	0		2	0	Partridges	2	0		2	6
Chickens	1	6		1	9	Grouse	1	9		2	0
Geese	6	0		6	6	Hares	2	6		3	0
Ducks	2	0		2	6	Rabbits	1	4		1	5
Pigeons	0	8		0	10	Wild do.....	0	8		0	9

WEEKLY CALENDAR.

Day of Month	Day of Week.	DECEMBER 12.—18, 1867.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.	Days.	m. h.	
12	Th		45.9	33.1	39.5	17	59 af 7	49 af 3	34 af 5	29 af 8	16	6 12	846
13	F	Day breaks 5h. 54m. A.M.	46.7	32.4	39.6	22	0 8	49 3	42 6	20 9	17	6 41	847
14	S	Royal Horticultural Society, Promenade.	46.1	33.4	39.8	19	1 8	49 3	55 7	10 10	18	5 16	848
15	SUN	3 SUNDAY IN ADVENT.	45.9	34.3	40.1	16	2 8	49 3	11 9	51 10	19	5 47	849
16	M	Cambridge Michaelmas Term ends.	45.4	34.0	39.7	13	3 8	49 3	26 19	26 11	20	4 18	850
17	Tu		45.5	33.2	39.4	18	3 8	49 3	39 11	57 11	21	4 48	851
18	W		44.7	32.4	38.5	19	4 8	49 3	morn.	after.	(	3 19	852

From observations taken near London during the last forty years, the average day temperature of the week is 45.7°; and its night temperature 33.3°. The greatest heat was 63°, on the 12th, 1841; and the lowest cold 18°, on the 15th, 1848. The greatest fall of rain was 1.24 inch.

LOW CORDONS.



DOUBTLESS many of us grumble at the capricious working of the laws—if there are any—which regulate the naming of plants; and the cases are not few in which

an ill-suppressed growl is called forth when, after ordering something with a strange name, instead of a novelty we unpack in great haste some old well-known plant—nothing the worse, certainly, from the mere fact of its being old, but highly objectionable on account of its thus receiving a fresh start in the world under cover of a new name, or, as more generally happens, of some old and obscure synonyme, longer and more unpronounceable than the name usually adopted.

Something very near akin to this is presented to us in the now-fashionable "cordon" system of training fruit trees. Some of its singularities in the way of pinching and pruning, and many of its more fantastic modifications, may be comparatively new, but the system itself is by no means a thing of yesterday. Sixteen years ago I saw lines of what would now be called double lateral cordons, occupying the back part of some long herbaceous borders in an old garden in Roxburghshire, and as far as I can now recollect—being then more interested in the fruit than the trees—they seemed to be at least thirty years old. Since then I helped to remove about 50 or 60 yards in length of Apple trees trained in a somewhat similar manner: only in this case the branches were triple instead of double, in such a form that a section of the cordon would be nearly triangular. The lower two branches were about 1 foot and the top one 18 inches from the ground, and they were trained on cross-headed stakes, each something very like a crucifix, additional stakes having been added year by year as required. Unfortunately, though not, I believe, resulting from the particular mode of training, these trees were more given to canker than fruit-bearing, so that they had ultimately to be taken out, and were at that time apparently not much under twenty years of age.

However, passing by the question when it originated, this system of low cordons, when considered altogether apart from the question of superior productiveness, will be found well adapted to small gardens where space and light have to be economised to the utmost, and where utility and a presentable appearance have to be combined to a degree undreamt of in those of four or five acres in extent.

One eyesore in small gardens very often is the Gooseberry bushes. Trained bush-fashion, these invariably look out of place when they occupy any other situation than a plot of ground or border specially devoted to their cultivation; but it sometimes happens that a row of them is

wanted as a division between two quarters, or along the back of vegetable borders skirting the walks, and in these cases this little revived mode of training is just what we want.

Various opinions exist as to the kind of trellis most suitable for the trees. One great authority in these matters recommends, in the case of Apple trees, no trellis at all, but simply galvanised wire pot-hooks thrust into the ground to secure the branches, much in the same way as Verbenas are pegged down; this might do for the first year or two, but as a permanent means of support is open to many objections. Another mode is the old espalier method of a series of independent wooden stakes, inserted when needed—which is very often, as, with all precautions they very soon rot at the surface of the ground; added to which, by each of these modes, a continuous line of either trees or trellis is not formed for some years.

As an experiment, rather than from any wish to economise ground, I lately put up a line of trellis on which to train Gooseberry trees in the following manner:—Strained wire being the support selected, and the length being 32 yards, three iron straining posts of the crucifix form, before mentioned, were procured. These were set in coarse blocks of stone. The height of each post above the point of insertion in the stone was 2 feet 6 inches, and above the ground when set 18 inches. The cross-bar is 12 inches long, and intersects the upright at 7 inches from the top, thus leaving 11 inches between the lower two branches and the ground, sufficient to admit of a hoe or rake being used under them. When the posts were fixed in their places, one at each end and one in the middle, a garden line was stretched along their tops, and iron supports inserted at 12 feet apart. These supports were of the same size and form as the straining posts, but made of light rod iron with the three ends flattened and pierced with holes, through which to pass the wires, and not having any strain to bear, were only fixed into pieces of wood. In straining, the wires were first fastened to the middle post, and strained to each end, beginning with the upper wire, then the lower two were tightened. It should be done little by little, first one and then the other, or if two screws were available it would be better if both wires were strained together. The reason for straining from the middle is, that by doing so less strength is required in the posts than if the whole length were done from either end. After receiving two coats of green paint, and having the soil, which had previously been trenched, well forked up, the whole arrangement was finished, and ready for planting as soon as dry.

There are several canny old sayings to inculcate the propriety of "not hallooing till we are out of the wood," or of "first catching our hare," &c., which many, myself among the rest, would do well to bear in mind; but in such a trivial matter as this little harm can result from our taking a good hurrah to ourselves before having much more than begun. I am, however, in nowise hopeful of any great success ever attending this toy system in our northern climate, and have never yet had sufficient reasons for expecting that any early flowering fruit trees will be in the least benefited by being trained as low cordons,

without protection from spring frosts; but in the case of the Gooseberry or Currant trees, their neater appearance, and the greater ease with which they can be protected from birds, will go far to atone for any slight shortcoming there may be in productiveness.

The term "cordon training" seems to me to be not a little vague; perhaps this impression may be the result of ignorance on my part, if so it would be a benefit to many besides myself if some one thoroughly acquainted with the subject were to point out what particular styles of training are included under this name; or, in other words, draw a cordon round what really are cordons, and explain how the import of the word can warrant its use in describing alike pyramid Pear trees in pots; Peach trees trained obliquely in single, double, or triple file; Pear and Apple trees fan-shaped, spiral, and espalier, on walls, or on trellises. The cordon has become quite a household word with the ladies throughout the country, and it is very awkward when asked questions about it to have to confess that we really know little about it distinct from what we have known and been practising for years in the case of our older modes of training.—*AYRSHIRE GARDENER.*

NEW ROSES.

THE invasion has taken place. Column after column (of catalogues), have taken the usual route, and landed on the shores of "perfidious Albion." The same well-known commanders; the same forces I fear, under different names, or so little distinguished from those which have for so many years disembarbed here, that it would require an experienced regimental eye to detect the difference in the facings; the battalions in some instances increased, but on the whole the effective force not quite so strong as usual. Field Marshal Eugène Verdier with his twenty-three companies, doubtless leads the van as far as numbers are concerned; and Colonels Margottin, Charles Verdier, Levêque, &c., take up their usual positions in the Paris contingent. Then up from Lyons, far towards the sunny south, Guillot fils, Ducher, and others, take up their position, and an imposing array, professedly friendly, stands before us. And how does John Bull look at it? Bless his old heart!—why, he welcomes them with outstretched arms, fraternises with their commanders, and receives the rank and file into his warmest quarters. Already at Cheshunt and Colchester, at Hereford and Salisbury, and other places too numerous to mention, have the best houses been prepared for them, a plentiful supply of fuel laid in, and everything done to make them comfortable. It is of no use telling him, "You are a foolish old fellow. These people have been over here before. They have told you they were friends; you have taken care of them, nursed them when they were sick, housed them, and yet, after eating your bread for twelve months, your anger has been aroused, and you have had ignominiously to kick them out of doors." "All very true," he says, "but these may be better;" and John thinks it a fine thing to be gulled. "It shows, sir, I don't care about money—not like those mean foreigners, who will haggle over a shilling. I like to be independent, and spend my money freely. Besides, you know, I may find some good fellow amongst what you call rubbish. And then, you know, I pay them back in kind. My friend Jean Crapaud, over the water, wants to know 'why the Dahlias, Pelargoniums, Fuchsias, &c., which return the fraternal visit of the Roses, are so much like their predecessors. Why will they not be honest? And if they are the same fellows let them say so; but not come blustering into Paris, be entertained as distinguished strangers, and then after all be found out as the visitors of a year or two ago, or so very like them that their best friends cannot distinguish them.'" So the mutual recriminations go on, and perhaps I must honestly avow "that there is a good deal to be said on both sides."

I now commence my annual task of examining the lists of new Roses; but I am sick of taking them in detail as I have heretofore done. The task would indeed be somewhat more difficult this year; for, whether intentionally or not, the lists that have been published do not contain the names of the growers, and one would have to search through the special lists sent out by each grower before that could be done—a task of which I may say that the results but poorly repay the trouble.

I was unable to visit Paris at the best time for seeing the Roses, and did not enjoy this year the opportunity of visiting Lyons at all. I paid a visit in October to my honest old friend

Margottin at Bourg-la-Reine, and with him had a good chat over the flower, of which I believe he knows more than any one with whom I am acquainted. He has been so long engaged with it, is so linked on to the bygone days when Hybrid Perpetuals were unknown, is known so intimately to the raisers in France, and is so honest and outspoken in his opinions, without the least touch of envy of others, or my-geese-are-swans sort of feeling, that it is always a great treat to enjoy his company. At the late period of the year at which my visit was paid few Roses were to be seen; but I did see blooms of his two, and heard his opinions of others. Like us all here, he deplores the vast number that is every year sent forth only to perplex and bewilder nurserymen and amateurs alike. At the same time he says, "Don't let us condemn hastily; a Rose may really improve in the course of a year or two." "I never," he said, "had the Rev. H. Dombrain so fine as this year; and Beauty of Waltham was lovely also." Then he says a Rose may be like another, but have nevertheless some better quality, or as he neatly expressed it as to Madame Victor Verdier being very like *Senateur Vaisse*, "*Ce n'est pas une meilleure Rose, c'est un meilleur rosier.*"

With regard to the Roses of 1866, as far as I have been able to form an opinion, my prophetic judgment was not very far out; and by-the-by, I am very glad to find that after long thinking about it, the Floral Committee of the Royal Horticultural Society have come to the wise conclusion of considering Roses sent out in the twelve months, whether in France or England, as belonging to that year. I advocated this two years ago in the columns of a contemporary. The editors, however, and my good friend Mr. Radclyffe took sides against me, and contended that Roses sent out in the autumn of 1866 in France were not to be regarded as sent out here till 1867. I hope this same rule will be adopted at the shows, for it is absurd to talk about stands of new Roses. You get some four or six of the really new ones, and the remainder is made up of Roses of the last two seasons. According to this new arrangement we must look for, in our stands of new Roses, only those of last autumn and this.

1866 will not be noted as an *annus mirabilis* in the Rose-grower's calendar. I did not think that it would, and the result proves my judgment to have been correct. In one point I hear that I am wrong. I thought very highly of Napoleon III. when I saw it at M. Eugène Verdier's. I am told that it is uncertain, and that it is an indifferent grower. I can only say it seemed to be neither the one nor the other. As far as I can see, the following Roses alone will "remain":—*Teas*, *Bouton d'Or* and *Madame Margottin*; and Hybrid Perpetuals, *Antoine Ducher*, *Horace Vernet*, and *Mademoiselle Annie Wood*. This is strong cutting back from sixty varieties. I have heard much of *Comtesse de Jaucourt*. It has been very much puffed up, but not a single bloom of it have I seen exhibited, or have I heard of any one who has seen it. *Thorin* may improve, at present it wants a little more substance; but cut about as Roses are, it is not fair to judge of them the first season. How wonderfully, for instance, *Lord Clyde* and *Princess Mary* of Cambridge improved from the first time they were exhibited! And so it may be with *Thorin*; the colour is fast and good. *Madame Rival* is like *Auguste Mie*, a splendid grower, but at present I cannot say I think very much of it. *Paul Verdier* I have not seen, but it is well spoken of. Of our English Roses I have not been able to see much, but I believe that *Mrs. Ward* will be a worthy compeer of *John Hopper*, and *Mrs. John Berners* an exquisitely shaped Rose.

Of the Roses which I have selected, *Bouton d'Or* is a charming little yellow Rose, very bright, and will be quite a jewel for Mr. Standish, in purveying for the button-holes of the young dandies at the West End; it is so neat, so bright, and so charming in every way. *Madame Margottin* is a lovely Tea Rose, dark yellow in colour, with a beautiful peach-coloured centre; very full and beautiful. *Antoine Ducher* is a large purplish rose flower, a seedling from *Madame Damage*, fine shape, large petals, and an acquisition. *Horace Vernet* is one of the bright Roses, of robust habit, of a good colour, but at present inclined with me to be a little rough. *Mlle. Annie Wood*, I have seen but two blooms of, but they were beautiful, the shape exquisite, the colour fresh and lively, somewhat, if I recollect rightly, in the style of *Olivier Delhomme*, but likely to prove a good Rose. So far for 1866.

And now for 1867. I honestly say that I do not expect very much from it. Of the sixty-five which are advertised, I have seen but four—two last year at Lyons, with *Guillot fils*, and two this year with *Margottin*. But it must be remembered with

respect to Roses, that this year all the growers about Paris had the opportunity of sending them to the Universal Exhibition, and that not on any one particular day, but at any time when they were in flower, so that if anything was really good it ought to have been there, and would, doubtless, have had an award according to its merits. I say nothing about the Lyons growers, because I know that the difficulty of sending their blooms in good condition was against them. I find, then, that at the Exhibition, the first prizes were awarded to Duchesse d'Aoste, and Prince Humbert, both belonging to Margottin; second prizes to Madame Marie Girod (C. Verdier), and Vicomtesse de Vesins; and third prizes to Madame Adèle Huzard (C. Verdier), Madame La Baronne de Rothschild, and Barillet Deschamps, and, therefore, amongst these ought to be found the best Roses.

I saw autumnal blooms of those varieties which obtained the first prizes. Duchesse d'Aoste is a large, lovely, satiny rose, but I do not think its shape will quite please us, being too flat, and not cupped. Prince Humbert is one of the sons of Général Jacqueminot, a splendid Rose in form and appearance, very fine, deep, shaded velvety red. Margottin told me with some degree of pleasure, that when Chevalier Nigra, the Italian Ambassador, was going round this Rose made a great impression on him, and he requested it might be named after Prince Humbert, the son of the King of Italy; the name was accordingly changed, and he was greatly pleased when he found that it had obtained the first prize. This will be, I think, an addition to our list worthy of notice, but Margottin has a Rose for next season, which he considers, and from a small bud I saw I do not think he is far wrong, to be the best Rose he has raised since Jules Margottin, and which he believes will be found in the Rose catalogues eighty years hence; it is called Souvenir de M. Poiteau. Reine de Portugal is a yellow Tea of great beauty, the darkest of the yellow Teas, and sometimes a coppery yellow shaded with rose. La France is of a new race; it is between the Noisettes and Bourbons, and is, therefore, likely to be, as I am assured it is, a very free autumnal bloomer. I have heard well of some others. Baron de Lassus de St. Geniès, was said to be good; and one of those purchased by Mr. Lee, Edouard Morren, was stated by all whom I met to be an excellent flower. Merveille d'Anjou, is, I conclude, one of Trouillard's, for I see a (T) to it in Eugène Verdier's list. Its wood is, I am told very fine, and if the flower has substance enough the description sounds well, but I detest Trouillard's Roses.

So ends my chat on Roses. What a popular flower it is, and what an increasing demand there is for it. My friend, Mr. Radclyffe, has done good service by upholding the Manetti, and well he may, for with him it is doing wonders, and I may say I do not think I have ever seen the Manetti so managed, as it is with Mr. Gill, of Blandford, from whom Mr. Radclyffe has drawn so large a portion of his stock. There is a clean and determined-to-grow character about them, and it does one good to look at them. His soil is light, and he buds very low, so that the Rose soon roots from the bud itself. We all live to some extent in the future, and the Rose grower looks forward, when winter is closing round, to the days when the spring beauties of his old and new plants will reward him for all his care and attention. May many of us see them next year with ourselves and our friends.—D., Deal.

GOOD PEACH TREES OUT OF DOORS.

"A STAY-AT-HOME GARDENER" is anxious to know where good out-door Peach trees are to be seen. There is at Lord Derby's, at Knowsley, as good a wall of them as any gardener could desire, and such as few are fortunate enough to possess. They are well trained, and clothe the wall from bottom to top with fruitful vigorous wood in the finest health, and, I believe as a rule, bear good crops of fine fruit.

The climate of Lancashire is, perhaps, one of the least favourable for most kinds of out-door fruits. The Knowsley Peach trees show what can be done by good and careful management, notwithstanding obstacles of climate. There are other things, too, at this fine old place well worth the attention of gardeners.—E. J. B.

GROUND VINERIES.—It is good news for the inventor of these structures and the makers of them to learn, from the *Times* of the 5th inst., the opinion of Vice-Chancellor Malins. In a judgment delivered by him he says, "A mere improvement was not sufficient to entitle a person to a patent, however me-

ritorious and valuable it might be." This at once releases the makers of ground vineries from the apparent prohibition of making them with one or both sides with hinges, hitherto adding 100 per cent. to their price.—VITIS.

A FEW NOTES ON THE CHRYSANTHEMUM.

ON visiting Mr. Salter's nursery a week or two ago, I was very much pleased—as who would not be? with a sight of his Chrysanthemums, and I thought of their utility as autumn decorative plants.

I saw at Mr. Salter's the use to which an ordinary lean-to vinery may be turned, and the pleasing results which might be obtained by a little ingenuity, and a very trifling expense. On entering the vinery by the door near Mr. Salter's house, banks of Lycopods, Sedums, Saxifrages, and some of the more choice alpine plants, are neatly arranged, but the Chrysanthemums are what I more particularly desire to draw the attention of your readers to at this time.

A winding or serpentine path has been made through the centre of the house, and from the back wall to the edge of this path were arranged in a tasteful manner the Chrysanthemums, and amongst them nearly all the finest varieties that have yet been raised, and a number of them are as yet only to be seen at Mr. Salter's. Chrysanthemums are also arranged along the front of the house, and a few other rare and beautiful plants have been added to heighten the effect.

I thought, Could not a vinery, an orchard-house, or any other suitable glass structure, be devoted during the autumn months to Chrysanthemums? In many gardens a few Chrysanthemums are allowed to grow for the purpose of decorating the greenhouse or conservatory, but a house full of them is seldom seen. Glass houses are in many cases devoted to the cultivation of Azaleas, Camellias, Pelargoniums, and other flowers, but a house full of well-grown specimens of Chrysanthemums is quite as interesting and effective as any of the others I have named. As they are in flower at the duldest and dreariest season of the year they are the more welcome on that account, and another point in their favour is that they do not require to have a house almost exclusively devoted to their culture. The Vines in a vinery which has been started in January or February, may be pruned in October, preparatory to being started at the same time in the year following. Such a house will do well as a show-house for Chrysanthemums; or an orchard-house might be used for the same purpose if the trees were placed out of doors and the pots plunged well over the rims in some light material free from worms. Chrysanthemums, too, are of such easy cultivation that any amateur may grow them without much chance of failure if ordinary care be exercised and the advice which I will try to give be followed.

I put in all the cuttings that are ready in January. Some of the varieties may not be ready at that time; the cuttings of these must be put in as soon as they are so, and if they should happen to very late they may be assisted with a little bottom-heat. The cuttings which I put in during January, I place in a cold frame, a single cutting in the centre of a 60-sized pot; and an ordinary-sized garden frame with one light will hold as many pots as will stock a span-roofed house 54 feet by 24. I plunge the pots in ashes, or, if it is to be had, cocoa-nut fibre refuse will be cleaner. The frame must be well banked round with earth, or it may be sunk in the ground, which will more effectually prevent the frost finding its way in; it should also be double-matted if the frost is severe. The cuttings will strike root very slowly, but they will grow strongly.

After the cuttings are rooted, and as soon as the pots are filled with roots the young plants are shifted. All of these, however, will not be ready for this operation at one time, as some of the varieties strike root more slowly than others, so that there may be two or three different times at which the small plants will require to be shifted. I use 5 and 6-inch pots for the first shift, using the latter size for the strongest plants, and I do not shift at any time until the pots are well filled with roots, but they ought not to be pot-bound. I prefer using 7 and 8-inch pots for the next shift, as if the plants are shifted into the blooming pots at this time they are apt to become leggy and to lose their underleaves before the season of blooming. The next shift should be into 9 or 10-inch pots for the Pompons, and 11½-inch pots for the large-flowering varieties. The finest Pompons I ever had were grown in 11½-inch pots from cuttings struck in January, on one of these plants I counted upwards of 1200 blooms expanded at one time, but such large

specimens are not so useful for decorative purposes as smaller plants in 9 or 10-inch pots.

As regards arranging *Chrysanthemums* in masses, the *Pompoms* and the large-flowering varieties ought never to be mixed, as the small flowers of the former have a mean appearance as compared with those of the latter, but have a very fine and distinct effect if arranged in separate groups. Then I use pots of a larger size—13 and 15-inch; and in each of these I place three plants of the large-flowering incurved varieties, and in this way I obtain the finest single blooms. This season I had flowers of *Empress of India*, and *Prince Alfred* 5 inches in diameter. I never pinch the centre out of the plants which I intend to grow for this purpose, so that they generally grow tall, and are not so effective in the show-house, but make a fine central row in a span-roofed house or a back row in a lean-to.

As to compost, I find the following very suitable for them—to eight parts turfy loam add two parts half-rotted horse-droppings and one part pounded oyster shells, also using oyster shells for drainage.

After the last shift the plants ought to be placed in the position which they are to occupy during the summer. An airy, though somewhat sheltered position in the kitchen garden, where they can have as much sun as possible, will suit them. They ought also to be staked soon after the last shift, as they are very easily damaged by the wind. Attention must also be paid to tying and training them as growth progresses. Some of the varieties of *Pompoms*, I like to grow and flower without using sticks at all. *Cedo Nulli* and its varieties, and a few others of the same style of growth, will do for this.

The exhibitors at the metropolitan shows tie the shoots down to the level of the rim of the pot, by means of a wire twisted into a circle 2 feet 6 inches in diameter, which wire is fastened to the pot, by first twisting a wire round the pot immediately under the rim, and placing two sticks or stout pieces of wire over the pot, crossing each other, and then tying them down to the wire.

I will not occupy space by enumerating varieties, as the lists which have been given in the reports of the various exhibitions are a sufficient guide to purchasers. I also find that different seasons have a marked effect on some of the flowers; for instance, *Princess of Wales* has not been quite full in the centre of the flower this year, whilst last season it was the finest; some of the white varieties, likewise, have not opened freely.

While on the subject of *Chrysanthemums*, I ask why have we not an exhibition of them, and also of fruit, in London at this season? One might be held in connection with the Royal Horticultural Society. Gardeners, and their employers as well, I have no doubt would subscribe as they do at Stoke Newington and other places. Such an exhibition is wanted in London, and I have no doubt if properly carried out would ultimately be successful.—J. DOUGLAS.

HOME-GROWN TANGIERINE ORANGES.

HAVING for some few weeks enjoyed these delicious little fruits, I am induced to send you a few with their leaves on them, for your degustation, trusting you may enjoy their brisk flavour and pleasing aroma. Some of my trees are in full blossom, adding much by their fragrance to the enjoyment of the pleasant temperature of the house, which in winter varies from 60° to 75°; the latter when a December sun enlivens the dull month.

These Oranges are easily cultivated, the great requirement is, if they are to be ripened in one season, a warm temperature—gentle artificial heat all the year round, approximating to that of Lisbon. The trees after arriving at an age of five or seven years bear most abundantly even in pots, but when planted out in the borders of a house properly heated, a house 14 feet wide requiring eight four-inch pipes, they become amazingly fertile. A little bush here only 2 feet high, is bearing three dozen of nice full-sized fruit.

Some few weeks since Mr. Pearson intimated in your columns that looking over Orange trees once a-week was tiresome; he seemed to forget that all greenhouse plants require at least a weekly superintendence, to give them water, and see that they are in health. It is so here with Tangierine, and other kinds of Orange trees. As to scale, the prevention system of syringing with clear quassia water is so beneficial, that it is seldom that a scale is seen, and that emaciated and in bad condition. When found it is "not made a note of," but picked off. Methylated spirit is now but seldom required. We do not imitate friend

Pearson in washing every leaf with Gishurst compound, its smell is not ambrosial, and our few scale insects are not robust.—T. R.

"What treats you Londoners lose!" was the postscript to a note accompanying the Tangierines, and we consider it a postscript rendered quite needless by the delicious fruit and the fragrant ivory-like blossoms. "Oh!" said one to whom they were shown, "how they remind me of Madeira, and my wedding day." As for "T. R.," he seems to grow young again amid his Roses and Orange trees, and if we had *Fortunatus's* hat and ring, we should visit him unseen, and find him in one of his orchard-houses, giving voice to that address which begins with—

"From a warm clime and generous soil
Removed, ye well reward my toil."

INFLUENCE OF THE STOCK OVER THE GRAFT.

ON being escorted through the vineries of a lady in Lincolnshire the other day, the gardener directed my attention to some fine bunches of *White Frontignan* hanging on one of the Vines, and appended this history. Five years ago, anxious to have a rod of the *Red or Grizzly Frontignan*, he inarched one on a *White Frontignan*. It grew rapidly, and has borne fruit every year since, but not one grizzly berry has it ever produced, but all white, exactly the same as the Vine did before being grafted. This is an influence of stock over graft of a decided kind.

The gardener is a most careful and intelligent man, and not at all the sort of man to make a mistake in the matter.—J. W.

ASPARAGUS CULTURE.

THERE being frequent inquiries as to the mode of making *Asparagus* beds—the when, how, and what to plant—I think the best answer will be to give full directions how to proceed throughout the plant's cultivation.

SOIL.—*Asparagus* thrives in a rich sandy soil. Sandy alluvial soils, and especially those charged with saline matters, are the most suitable for its growth. Stiff retentive soils are bad; and unless they can be reduced to a light porous condition, the growth of *Asparagus* in them will be poor and dwindling. The subsoil, whatever may be the texture of the surface soil, should be freed of water, which can only be done by efficient drainage. Shallow drains, as they merely prevent water on the surface from passing into the subsoil or down to the roots, are valueless. For drains to be of any use they should be placed at the depth where water, after it has passed through the soil, would be likely to lodge, and consequently destroy the roots, or prevent their extending lower down. The roots of *Asparagus* penetrate the ground to a great depth in light porous soil, and in almost all cases they will push their ramifications to a depth of 3 feet. This is as deep as the ground intended for *Asparagus* need be made light and porous. It is necessary that all water falling on or given at the surface should pass through and thoroughly moisten the soil to the depth to which it is loosened, or to which the roots extend; and it must be obvious that any excess of moisture beyond that naturally retained by the soil must be destructive to the roots, and ought to be carried off. Drains should therefore be laid at about 1 foot greater depth than that to which the ground is made light and porous, so as to prevent water from rising higher than the level of the majority of the roots. Drains, then, should be laid so as to carry off any accumulation of water existing at a depth of 3 feet or less; and for *Asparagus* they need not exceed 4 feet in depth.

The ground being well drained, the next matter to be considered is the soil; for it will be necessary to vary the preparation of it according to its texture. A rich, sandy, alluvial soil will not need any further preparation than that of trenching to a depth of 3 feet, and working in a liberal quantity of manure, which may equal 6 inches in thickness over the whole of the surface.

Soils that are light and sandy, but not naturally rich, should also be trenched to a depth of 3 feet, an opening 3 feet wide being taken out at one end or side of the plot for its full length or width. The bottom being loosened with a pick, the top spit of another trench should be placed at the bottom of the first trench, and equally all over; and upon this 3 inches of manure, or seaweed if it can be had, may be spread, and should be mixed with the soil first placed in the trench, by forking it

over. The next layer will, of course, be soil from the second trench; and upon this again will be a dressing of 3 inches of manure and 3 inches of leaf mould. The natural soil being very light, it would be well to add 3 inches of the mud from ditches which has lain some time, and if it has been formed into a compost all the better. This layer is mixed in the same manner as the preceding, and the last spit from the bottom of the second trench is thrown upon it. The top of the first trench may then be covered with 3 inches thick of manure, 3 inches of leaf mould, and a like thickness of scourings of ditches. Seaweed if it can be readily obtained may be used in the place of the manure. This last layer may remain on the top until February or early in March, a dry period being chosen to fork it over and mix it thoroughly with the last spit of the trench turned up, and upon which the last dressing of manure, leaf mould, and ditch-scourings were applied.

Soils that are light and shallow with a coarse and gravelly subsoil will not be at all benefited by trenching so deeply as to bring up much of the gravel; indeed, it is as well to leave it at the bottom. On the removal of the soil for the first trench the bottom ought to be picked over or loosened, and a dressing of manure, the scourings of ditches, or any kind of sandy mud, and leaf mould, may be given; and then have the first spit of the next trench placed upon it and mixed with the enriching materials. The remainder of the soil, which may not be more than the shovellings of the first spit, should be thrown on the first trench, and upon it again another dressing of manure, leaf mould, and ditch-scourings, equal in quantity to the first; and it may remain until March, and then be worked in and mixed with the soil, the whole being well incorporated.

Soils that are heavy and tenacious with a clay subsoil are not to be trenched deeper than the depth of the surface soil, for the subsoil neither benefits the soil with which it is mixed nor is materially altered by mixing with other ingredients, unless it be exposed to the atmosphere, and rendered light by manuring and long working, which is, however, a work of years. Heavy soils such as these should be treated in the same manner as soils having a gravelly subsoil, and should have the same addition of enriching materials, besides a dressing of 3 inches of sand (river or sea sand being best), and a like thickness of sandy mud, such as that afforded by ditch-scourings or road-scrappings.

Where the surface soil is of a very tenacious character it is hardly possible to render it suitable for the growth of Asparagus by any admixture. I would not advise anything to be done to it beyond trenching it as deeply as it is possible to do without bringing up too much of the clayey soil, and in trenching to work in a dressing of not less than 6 inches in thickness of cinders or ashes, the finer particles or dust being sifted out. If it be thrown up in ridges in autumn it will in spring be less stiff in texture, and may then be worked, and dressed with the materials already named for heavy soils; and these being well mixed with it, it will be in a fair state for planting in May. When, however, the soil is little less than a stiff clay, it must be burned before it will grow Asparagus satisfactorily, and after burning it may be mixed and prepared in the manner already described for a heavy soil, the burned clay being mixed with the other ingredients, and as soil.

Failing the burning of a portion of the clay, where the soil is a stiff clay it will be necessary to remove some considerable quantity of it; indeed, to make suitable beds in such ground, I have found it advisable to take all away (except, perhaps, the top spit), to a depth of 2 feet 6 inches or 3 feet, and replace it with that depth of the following ingredients in layers 3 inches thick, and in the order named—hotbed manure, sharp sand, ditch or pond cleanings, leaf mould, and turf from a sandy soil. Now, this laid up for three months and turned at the end of that time, will, on being chopped up and well mixed, form a compost in which Asparagus will grow well.

The soil and whatever is added to it should be mixed thoroughly, and not be placed in layers and so left. The beds ought not to be made when the ground is wet. September is a good time, and, indeed, any time in autumn during dry weather. They may even be made at the time of planting, only if the ground is planted immediately after the beds are made it is apt to settle in holes, and the crowns of the plants become unevenly buried or covered by the annual top-dressings.

SITUATION.—An open situation should be chosen, unshaded by trees; but it is well to choose a position sheltered from violent winds, as when powerful they break the stems in summer, and diminish production in the following year.

PLANTING.—I consider Asparagus best grown in beds 4 feet

wide, and such I think best for general purposes. This allows of three rows of plants in each bed, the two outer rows being 1 foot from the sides of the bed, and a row along the centre. The beds should have two-feet alleys between, whether they are 4 feet, 3 feet, or 5 feet wide. The latter two widths are recommended by some because the beds, being narrow, are sooner heated by the sun's rays, and therefore induce an earlier production of heads; whilst five-foot beds, it is said, afford a later production. Three-foot beds will allow of two rows of plants, each row 1 foot from the edge of the bed. Beds 5 feet in width will allow of three rows of plants, the two outside rows 1 foot from the edge, and a row along the centre. The plants should not be closer together in the rows than 1 foot apart, and that distance will be sufficient for general planting; but if large heads are wanted the plants should not be less than 15 inches apart, and need not exceed 18 inches.—G. ABBEY.

(To be continued.)

PLANTS IN BLOOM DURING NOVEMBER.

To give an idea of the mildness of the season here during November, I may state that early in the month a very large Cedar of Lebanon was in full bloom, presenting in the sun's rays a very curious appearance when viewed from a short distance off. I am not aware that such a circumstance is of common occurrence. We have had some very fine Raspberries from the ordinary quarters during the month; very good Black Prince Strawberries, considering the season, have been gathered; Apple trees of different kinds have been in bloom; and Peas have been gathered. Bedding plants, as Calceolarias, Scarlet Pelargoniums, *Tegetes pumila*, *Phlox Drummondii*, and others kept up a display until the 27th, when we had a reminder that the Ice King had not forgotten us.

Nov. 2, <i>Erigeron canadense</i>	Nov. 10, <i>Plantago coronopus</i>
<i>Cedrus Libanus</i>	<i>Pyrethrum uliginosum</i>
<i>Prunella vulgaris</i>	<i>Rudbeckia fulgida</i>
<i>Anagallis arvensis</i>	<i>Stenactis speciosa</i>
<i>Salvia pratensis</i>	" 15, <i>Ruta graveolens</i>
<i>Campanula coronata</i>	<i>Anthemis tinctoria</i>
<i>Mulle Pluk</i>	<i>Chrysanthemums</i> , various
" 6, <i>Cnicus palustris</i>	<i>Phlox reflexa</i>
<i>Rosa Maria Leonida</i>	" 19, <i>Anagallis Monelli</i>
<i>Hedera helix</i>	<i>Aster grandiflorus</i>
<i>Passiflora cerulea</i>	<i>Liatris scariosa</i>
<i>Dianthus chinensis</i>	<i>Crocus serotinus</i>
<i>Sonchus oleraceus</i>	<i>Primula auricula</i>
Apple trees	" 24, <i>Viola odorata</i>
<i>Cynara scolymus</i>	<i>Nepolian</i>
<i>Achillea ptarmica flore-pleno</i>	<i>lutea</i>
<i>Anthemis parthenoides</i>	<i>Phlox Drummondii</i> , Black Warrior
<i>Aster elegans</i>	" 28, <i>Rosa chinensis</i>
<i>speciosus</i>	<i>Senecio tanaetifolia</i>
<i>Centauria pubescens</i>	Strawberry Black Prince
" 10, <i>Achillea compacta</i>	<i>Hautbois</i>
<i>Dianthus laciniatus</i>	<i>Phlox Van Houttii</i>
<i>Nepeta violacea</i>	

—M. H., Acklam Hall, Middlesbrough-on-Tees.

PROPAGATING PELARGONIUMS.

In your last week's impression Mr. Stewart, of Nuneham Park, gives his method of propagating Pelargoniums. Now, I venture to say, that if amateurs were to follow the above advice, ninety-nine out of every hundred would find themselves in a "pretty pickle" when bedding-out time arrived. The plan may do under Mr. Stewart's management, but a great many would have to consign their cuttings to the rubbish-heap.

My plan may not be better than Mr. Stewart's, but it is diametrically opposed to his. We strike many thousands of Pelargonium cuttings here, part of which are put into deep pans, and part singly into large 60-pots. The whole receive a good watering if the weather is dry, and none at all by hand if the weather is showery. All the pans and pots are placed in the full sun on a gravel path, quite closely together. A little watering in dry weather, and more space after the young plants begin to grow, are all the attention they require until the first week in October, when they are housed. By this plan not one cutting in a thousand will fail, and frames can be used for other purposes.—J. PERKINS, Gardener, Thornham Hall.

WRITING ON GLASS.—We read in *The Builder*, a paper which gardeners may often consult with advantage, that M. Kessler, a French chemist, has by means of hydrofluoric acid, and ammoniac, and hydrochloric acid, properly thickened, made

an ink by which with any pen ineffaceable characters can be traced on glass. Possibly some of our gardening friends may turn it to account also.

GARDEN WALLS.

If all that some writers stated a dozen or more years ago about the inutility of garden walls had been verified by subsequent experience, these would have been less numerous than they now are; but after the first ebullition of feeling in favour of a substitute had subsided, and the failure of such substitute had become manifest, the old wall regained its popularity, and the remembrance of its long continued services gained for it a fresh recommendation when the costliness and comparative inutility of substitutes were fairly tested. Although garden walls may not have increased in the same ratio as glass structures during the last forty years, they have, nevertheless, retained their character for utility in the garden. If the area of glass devoted to horticultural purposes has increased twentyfold during the last forty years, possibly walls may not have become more than ten times as numerous or extensive. These proportions, however, are merely approximations, but tend to show that a wall in some form is of as much importance in a garden as ever it was, and it is only fair to remark that more than three-fourths of the glass structures erected are supported against walls new or old.

The value of walls cannot well be over-estimated; but it is somewhat strange that while everything else connected with gardening has been more or less frequently commented upon in horticultural periodicals, garden walls have but very seldom been mentioned. Assuredly this silence cannot arise from the disregard of them, but simply because there is less difference in the building of a wall than in most other mechanical operations connected with gardening. Still, as plain walls may differ from each other, and the most useful form may not, perhaps, be known to everyone, a discussion on garden walls would by no means be uninteresting, and might, perhaps, tend to assist those about building, and that class is one daily increasing.

It is at all times a prudent course to look at the best examples of existing objects for our guidance, and of garden walls there are plenty whose period of utility may be counted by centuries; and although it may not be advisable altogether to copy them, information may be gained by observing the materials of which they were constructed. In many walls built towards the latter part of the last century, it will be discovered that the bricks were not so good as in walls 150 years old or even of greater age. From this deterioration brick-making had not recovered at the beginning of the present century, and some will say it has not even done so at the present day; but although this partly arises from the great demand for the article, it is also frequently more the fault of the buyer than the maker. Good bricks, however, can be obtained at the present day, and the question arises, What kind may be considered the best? for, I suppose, this material is in ninety-nine cases out of a hundred to be that employed in building a garden wall. Perhaps some reader who is better versed in building than gardeners usually are will assist, and, if need be, correct what is now stated on the matter.

BRICKS.—Although several varieties are manufactured, the bricks employed in plain building may be roughly divided into two classes—viz., those that are burnt in a kiln by a fire being kept on some time beneath them, and those that to a certain degree contain the necessary substances for burning within themselves, and after being ignited burn in an open heap, or clamp, as it is often called. I believe the latter class of bricks to be of more modern origin than the former, and they have advantages for building dwelling-houses and some other purposes which render them greater favourites in some respects than the kiln bricks. They are said to absorb less water, and, consequently, when exposed to driving rain less of it penetrates through them than when it is driven against a wall of the other kind of bricks. This qualification, however, is not so important for a garden wall as for a dwelling-house; still, it must not be lost sight of as being a great advantage, which is increased by the fact that bricks made in this manner do not so readily succumb to the weather as those of the other class; but they are coarse, and bricklayers cannot make such neat work with them as with kiln-made bricks. The latter being better shaped, generally more correct to pattern, and presenting a smooth surface, offer advantages which are duly appreciated by the ornamental builder. One not unimportant property

which they possess is that nails can now and then be driven into them, which is not so easily done with the half-cinder or half-clinker brick, for I believe that to the latter kind of brick having undergone the process of burning within itself, and become a sort of properly shaped cinder, is in a great measure to be attributed its durability. The properties of the two kinds of bricks may, however, be so modified by a variety of circumstances, that no established rule can be laid down for the guidance of the inexperienced. Fancy or ornamental bricks, and those made for some special purpose, will hardly be required for garden walls. A headed brick, perforated so as to render nails or even wires unnecessary, being more an appendage to a wall than a part of it, will be described afterwards.

MORTAR.—This is certainly rather a question for the bricklayer than for the gardener, and local circumstances generally determine the kind that must be used; but care should be taken by the builder to ensure the mortar covering the whole of the end of the brick as well as the bed, as there is a disposition on the part of the bricklayer to only scrape a little off the trowel upon the front edge. This is not sufficient, as in pulling down brickwork it is sometimes seen that there are portions not touched by the mortar at all.

Assuming the wall to be intended for trees, the mortar ought to be so qualified by sand as to admit of a nail being driven in easily; a too-hard setting lime is not so good, and cement ought to be avoided. Generally the quality of the sand determines in a great measure the character of the mortar as much as the lime; but other conditions best known to the builder often decide both, only it must be borne in mind that the mortar constitutes a very important part of the garden wall, and care must be taken to have it good. I believe that, as a general rule, good stone lime, as it is called in some districts, is best, but very good work is often done in chalk lime; I am not sure but the blue lias lime of some of the midland counties, which is brought to London for particular purposes, is too hard. This, however, can be better answered by those who have had experience of it. Fancy pointing may be indulged in by those who prefer it; but the ordinary mode of bayonet pointing will do very well for a garden wall.

COPINGS.—The coping is an important part of the wall, but I would not give it the prominence which some are disposed to do. Perhaps nothing in the whole range of wall-construction has given rise to a greater diversity of opinion than copings. The difference chiefly appears to be in the width of the overhanging portion; all, I believe, being agreed that the coping should project more or less, though some would have the width of the overhanging portion only an inch, and others a foot. Perhaps the best practice, as is very often the case, is to take a medium course; or, better still, a moveable coping may be adopted—i. e., one that can be put on or taken away as wanted. When this can be done a very narrow coping would be sufficient; nevertheless, I would not advise that any permanent coping should overhang the wall less than about 2 inches, neither would I advise that any ordinary coping project more than 3 inches beyond the face of the wall, for I would rather depend on other protection when such was wanted. There are evidently evils attending a dark overhanging coping of great width, which are only partially compensated for by the protection it affords. Something, however, is required to keep the top of the wall dry, and the best material that I have met with for this purpose is the cement coping, which when made to overhang about 2 inches affords room for a sort of groove or throat on the under side, to prevent the water falling on the top finding its way to the wall. Stone might be employed instead of cement, but is more expensive, and brickwork is usually in such short pieces as not to be so convenient. I have, however, been told of a kind of coping which is said to possess all the advantages of the wide one without its defects, and this is glass; but not having seen any of it, I cannot speak of its utility. I understood that it projected about a foot, and was sufficiently strong to bear a ladder set against it; but I expect a heavier coping was placed upon it to hold it down. I have sometimes seen slate employed, but it did not appear satisfactory. Wall copings, however, being necessary, perhaps some correspondent will state his experience in the matter, and describe the mode in which moveable boarding can be fixed to the top of the wall or taken down again with the least amount of mechanical contrivance. Most of the modes which I have seen adopted with these objects in view were either clumsy or inconvenient.

CONSTRUCTION OF A WALL.—This is often determined by circumstances which admit of little deviation, and it is unneces-

sary to make any remarks about aspect or position. I will, however, observe, that where the Peach and Nectarine are intended to be grown, and where coals are cheap, the old-fashioned mode of building walls with flues in them may be very advantageously copied; and when it is known that very good crops of Peaches are often obtained in places very uninviting as to their natural position, the advantages of the flue ought not to be too lightly estimated. I believe I am right in saying that a single tree growing against such a wall has been known to produce a greater quantity of good fruit than any orchard-house of potted trees occupying an area of 1000 square feet. Where coals are dear the flue cannot well be adopted, although I have heard it urged that a hollow wall is advantageous.

And now as regards the other features of garden walls. Occasionally we find one built with projections and recesses said to be advantageous. Some such walls have projecting buttresses, like pillars, standing out, perhaps, a foot from the line of the wall, and placed at intervals of 30 feet or so; and I have known the coping to extend a foot, so as to give great protection, but its thus preventing the trees benefiting by the rain and dews, seemed to neutralise the advantages of shelter. Some old walls only 9 inches thick have been built with projections and recesses of equal lengths the whole way, so that both sides of the wall are alike; only the part that is a projection on one side forms a recess on the other, the difference, however, being only half a brick ($\frac{1}{2}$ inches). Ornamental walls built in panels are also not uncommon, but in many of them the only object is the saving of bricks.

There is a $4\frac{1}{2}$ -inch wall described as existing at the nursery of Mr. Pearson, of Chilwell (see page 386), composed of projections and recesses, the recesses being about a yard in depth. This no doubt answers very well; but some time ago I saw a wall of similar thickness, only $4\frac{1}{2}$ inches, about 7 feet high, which had stood for about thirty years, and did not appear in the least out of order; but instead of being built in straight lines and at right angles it was a continuous succession of segments of circles meeting and joining each other—in fact, serpentine. This wall both in appearance and for utility could not well be surpassed for its height, as by its structure one part held up another, as any one may test by bending a sheet of paper into the same form and setting it on its edge. To all who may be about building a $4\frac{1}{2}$ -inch wall I would advise them to do so in this way, but of course in most cases a thicker wall is to be preferred; and where it is intended to have the wall more than 9 feet high, which all garden walls ought to be, it ought either to be well strengthened by buttresses, or, which is better, be made 14 inches thick from the bottom. With the latter thickness of brickwork any reasonable height may be built. I believe the fine Peach wall at Knowsley, near Liverpool, is 15 or 16 feet high; but 12 feet are generally high enough, except when the situation and other circumstances favour the growth of the fruit trees, as at the place mentioned above, where some years ago it would have been difficult to have found a bare place as large as a sheet of note paper on a wall of some 500 feet in length.

Having extended this article beyond the limits originally intended, some notice of the other features of a garden wall must be postponed. I may, however, ask those who have had a lengthened experience of the wire or wooden lattice-work sometimes affixed to walls to state their opinions respecting such. My own is much less favourable now than it was thirty years ago. I likewise do not see any advantage in the beaded brick alluded to in the early part of this communication, which bead is a sort of horseshoe-shaped moulding projecting about three-quarters of an inch upon the face of the brick, there being small holes perforating the beading to admit of a string or wire being passed through for tying the trees. No nails or wirework, it is said, need be used; but the process of fastening a tree would seem to be so tedious that I fear this kind of brick cannot well be recommended. I have seen cast-iron bars or plates built into a wall to allow of rods as thick as those used in iron fencing being fixed, and it is certainly advisable where a wirework front is intended, to build in some of the fastenings as the work proceeds; the top and bottom loops, or the end ones when the wire is strained, ought to be very secure, as they have all the work to do. I may, in addition, remark that where a wall adjoins a plantation of vigorous-growing forest trees, especial care should be taken to go deep enough for the foundation to prevent the roots finding their way underneath, otherwise in all probability in a few years it will be found that the health of the fruit trees will decline, and that very rapidly

perhaps; for the Ash, Elm, or other trees will rob them of nourishment. I have known more than one instance of this kind.—J. ROBSON.

THREE PLANTS FOR WINTER FLOWERING.

I OFTEN see questions from your correspondents, asking for good plants to flower in the greenhouse in winter. Allow me to recommend two or three, which, though very beautiful, are seldom seen.

SAXIFRAGA LIGULATA.—A hardy plant, but flowering in the winter; the flowers do not come to much out of doors. In the greenhouse it bears many racemes of large flowers, pure white at first, but afterwards turning pink, with pink stamens. It is very useful either for nosegays or to wear in the hair. *Saxifraga ciliaris* is very like it, but not quite so good, as the stalks of the flowers are very short. They both flower in January.

SPARMANNIA AFRICANA.—A beautiful shrub, now in flower, with large and rather coarse leaves, and bunches of pure white flowers with golden and red stamens. Easily increased, easily cultivated, and, I think, might be grown to make a good table plant.

FUCHSIA DOMINIANA.—Flowers in the way of *Fuchsia fulgens*, but the flowers are of a brilliant scarlet, and the stems and undersides of the leaves dark red. It is hardy, but seldom perfects its flowers out of doors as they generally appear in the winter. It is now in flower.—H. N. E.

FRENCH AND ENGLISH GARDENING.

IN your columns, and in those of the *Times*, and elsewhere, I have gently corrected the inaccuracies of the "writer," as I felt it to be a duty I owed to English gardeners and gardens, and I feel much gratified that I have had the industry to write on such a subject.

I have looked over the long tiresome reiterative paragraphs of "THE WRITER OF THE ARTICLE," &c. I have fully replied to them all, and all that I have said is perfectly true. A Pear tree trained against a wall horizontally, and its branches pruned in summer, is a true cordon, no matter if it has ten branches; the name is good, as we have not a word that conveys the same meaning.

I observe that "THE WRITER OF THE ARTICLE" is ashamed of his remarks made in the *Times*, about English wall Peach trees, he had need be. It is quite true that in loose borders, and with careless cultivators, Peach trees on walls are failures. It is to that class my remarks apply, to stir up their energies; at the same time I know well that with our skilled gardeners, the finest trained Peach trees in the world are to be found.

As to the price of fruit such as "THE WRITER" presses about, the records of Covent Garden would show that good Peaches are often sold at 1s. and 1s. 6d. per dozen by the salesmen, not in the shops, and good Pears at 2s. 6d. and 3s. per bushel. With regard to Pears on Quince stocks, "THE WRITER" may write on horticulture, but he has evidently not read much; he must commence, to use his own term, to "pull up." I could show him an English work in which the culture of Pears on Quince stocks is recommended, and this upwards of two hundred years since.

There is only one paragraph out of the "dreadful drearies," in pages 421 and 422, worthy of my notice here, and as this may convey some little instruction, and make some amends for the waste of valuable space in noticing "THE WRITER OF THE ARTICLE," I beg permission to say a few more words. "W. R.," I beg his pardon, "THE WRITER," went to Paris about last April or May, his first visit, "dumb in French," as he acknowledged himself to be. Now I ask what could he see of winter salads, about which he expresses himself so grandly? He never saw one. This little fact stamps indelibly the value of his assertions. The winter salads of the French are Dandelion leaves, and wild Chicory, blanched in cellars; the former always bitter, the latter nearly always. The latter is called *Barbe de Capucin*, or the Capuchin's beard. By a little stretch of imagination it may be likened to the long white beard of a Capuchin monk, clipped and served with oil and vinegar, for it is almost as tough. I fear that "THE WRITER" has not had much experience in a well-managed English or Irish household, or he would know their salads. My winter salad, and I doubt not that of hundreds of others who know what is good, is taken from my orchard-house, and consists of fine firm hearts of Batavian and Curled Endive, or of the white

hearts of Cos Lettuces, so crisp and delicate owing to the warm climate in which they have been growing ever since the early part of September, that they are alike easy of mastication and digestion. The usual small herbs are, of course, used with my salads. My Lettuces and Endive were sown in July and August, and transplanted to a rich border in the orchard-house early in September. They are now making firm hearts, and will be in fine order by Christmas, and if the Paris Lettuces sent over to Covent Garden next February and March are no better than these—I have given 6d. each for these—mine are worth 1s. In severe weather my salad plants are covered with mats, with light dry hay placed on them.

With regard to the superiority of low-roofed houses to those clumsy barbarous green bell-glasses, it is as Mont Blanc to Chamouni. I find that a space of ground of 1000 square feet in round numbers, a house 60 by 14 feet, with a narrow path in the centre, will produce two thousand and upwards of fine Lettuces in winter, always comestible. How immeasurably more convenient than those clumsy glasses always to be moved, and which, like the iron wires recommended by "THE WRITER OF THE ARTICLE," are things of a past age! I entertain, however, a kind respect for "THE WRITER," which I trust will be increased when he becomes a "second Loudon."—T. R.

[Here this controversy must terminate, and we wish that it had been conducted with less acrimony. A gentleman writing to us from Norwich, says—"It is full time that your correspondents should understand, that an aptitude for sharp and clever writing ought not to be used to wound the feelings of men who have deserved well of society, and added materially to the pleasures of their fellows. Legitimate controversy should not be trammelled by too much respect for authority, but hard words and personalities cannot subserve the interests of truth and science." In this we most fully concur, and many times are we surprised to find men of intelligence writing, not as if they desired "truth above all things," but as if they wished to blister the feelings of those who had dared to criticise them.—EDS.]

GROWING THE GLADIOLUS IN A HEAVY SOIL.

I AM not a large Gladiolus grower, having about thirty varieties. Three years ago I lost several bulbs from the disease "D., Deal," speaks of on page 379, and it led me to fear that growing the Gladiolus in heavy clayey soils is almost impossible.

Taking courage in the spring, instead of potting the bulbs and forwarding them under glass as I used to do, I retarded them as much as possible. Early in April they generally show symptoms of growing, when I take them to the bed. The soil of this being very heavy is thrown out 18 inches deep, and plenty of decayed dung and leaf mould, with a little soot, are added and well mixed. About 9 inches of this mixture having been thrown in, the bulbs are placed 10 inches apart in the row, and the rest of the soil is very carefully put in. Every bulb soon throws up leaves and blooms well.

As soon as the blooming season is over, and not waiting until the foliage is quite yellow, I take the bulbs up, as M. Souchet, the great French grower, recommends.

I have this autumn taken up, while in full bloom, many bulbs which were late in flowering, finding them quite firm, and exposing them to a warm and dry atmosphere. I have seen no disease since I adopted the plan of taking them up early. I do not cut the leaves off as soon as the bulbs are taken up, as M. Souchet recommends, but leave them to come off of themselves.

I think much may yet be done with this favourite flower in respect to bedding it out. Gladioluses are not effective in beds by themselves, except when each variety is planted separately, as they flower, when mixed, at different times. They look noble, however, in low so-called American beds and herbaceous borders.

I hope some of the experienced growers will publish in this Journal a list of the varieties which flower at the same time.—H. COMLEY, *Hendre Gardens, Monmouth.*

PEACHES IN FRANCE.

WILL you kindly allow me a small space to inform "G. S." (see page 423), that I visited Paris for the first time in August last, and that, perhaps, nothing more surprised me than the

abundance and good quality of the French fruit accessible, as it was, to the poorest labourer? I purchased deliciously ripe Peaches for one halfpenny each, fine ones for one penny, and for twopence-halfpenny such as I may fairly term super-excellent.

I was delighted to see the care which the French bestowed on the fruit trees in their gardens, and I came away with the impression that, although we beat them completely in floriculture, especially as to arrangement, yet they beat us as significantly in the culture of fruit.

The last purchase I made in Paris was a handful of Peaches in the Rue d'Amsterdam, for which I paid one halfpenny each, and very refreshing they were to me when exhausted with the intense heat which was experienced during the journey to Dieppe.—C. W. M.

GRAPE JUDGING.

THOUGH this subject has now been so discussed as to be almost exhausted, I am tempted to send you an anecdote I heard from that veteran Grape-grower, the late Mr. Crawshaw, of Ottershaw.

I had asked his opinion about shanking. He confessed absolute ignorance on the subject, and said that one year he had a Red Frontignan, which ripened off every berry, though the treatment was exactly the same as usual, and he knew no reason whatever for its temporary immunity from shanking.

Appropos of this, he added, that he had once offered a prize for the best dish of Grapes. On the day of trial he disagreed with the other judges, but at last persuaded them to award the prize to a plate containing a bunch of each of the three colours of Frontignan, in preference to some magnificent specimens of Hamburgs, on the ground that these latter were easy to grow, while three bunches of Frontignan, from three different plants, without a single imperfect or shanked berry, were something most unusual. It was a clergyman who gained the prize, and Mr. Crawshaw was anxious to learn from him the secret of success. He replied that he knew very little of Grape growing; but having put a few Vines in a greenhouse, and finding their fruit very nice, he thought he would send a plate to the show. Mr. Crawshaw said, "If such be the case, I request you will send me next year just such a plate as this, and upon your doing so I will erect for you, at my own expense, a vinery 60 feet long, heated with hot water." The clergyman stared in blank amazement. Mr. Crawshaw said, "I am really in earnest; but do not for a moment expect that you will succeed again. At any rate, promise to write me a note as to whether your Grapes shank next year."

The following autumn the note came, but no Grapes.—G. S.

TREES AND SHRUBS INJURED AND UNINJURED BY GAME.

At a time when the preservation of game is a subject of such importance to those interested in rural affairs, some remarks on the plants which game will and will not injure, may not be unacceptable to many of the readers of this Journal, especially as from a want of this knowledge labour and materials are often thrown away in planting covert. Under the term game I shall include rabbits, which form by far the most numerous and destructive enemies to new and even old plantations. Perhaps some of your correspondents will favour us with their experience in the matter, not confining their remarks to ornamental trees and shrubs only, but mentioning the most common wild plants or shrubs that escape the devouring propensities of this rapidly multiplying animal. Having had some experience of its ravages, I will mention a few plants often found in its haunts, and the manner in which they are treated. The list, however, is a meagre one, and is only meant as a contribution on a subject which others who have had more experience may enlarge upon.

Furze, Gorse, or Whin, is destroyed wholesale when in the young growth. Plants of any age cut down in winter, and sending up their young growth in early summer, seem to furnish rabbits with their choicest food. The same may be said of young seedlings. Old prickly wood escapes, but the new growth from such is nipped off as produced.

Holly and Broom both suffer, being barked in winter; even trees as large as a man's leg are nibbled all round.

Quickset hedges are also destroyed in winter from the canes

last described, while the young shoots in summer seem as attractive as those of the Furze.

Willows are not such favourites as the plants just named, but in severe winters all the kinds are laid under contribution.

Of Brambles and Briars, the former certainly are partaken of when in a young state, and large beds are sometimes killed; but of the latter I am not able to say anything.

Scotch and Spruce Fir, and similar kinds, are all greedily devoured when in a small state, and within reach. The bark of trees of any considerable size, however, seems to be less palatable than other things.

Ash and Hazel are both great favourites, especially the former.

Oak, Elm, and Alder, are not so much sought after as Ash and Hazel, yet are not exempt from attack.

Of Maple, Beech, and Hornbeam, I have not had so much experience, and, therefore, cannot say anything.

Poplar, Dogwood, and Birch, are not generally attacked, but are all liable to suffer in hard weather, where rabbits are numerous.

Yew and Juniper, contrary to what might be expected, are very often much eaten by rabbits, notwithstanding the supposed poisonous quality of the first named.

Elder generally escapes, it being, I think, about the last tree they will attack either in the young or advanced state.

Amongst plants of less height, the young growth of the Heath is eagerly sought after, and the plants are often killed. On dry ground Nettles and Foxglove often escape, and on wet or damp ground, the *Scutellaria nodosa*, a rampant plant 3 or 4 feet high, is seldom interfered with, as is likewise the Sedge, but the soft Rush is laid under contribution; and Grasses of all kinds, and most other herbaceous plants suffer in like manner where the number of rabbits is great.

The above being only a hasty glance at the subject, perhaps some one better versed in it will state how the more choice and ornamental shrubs and trees fare. A knowledge of those which are proper for planting as cover for game is much wanted.—H. B.

NOTES ON SOME OF THE GARDENS IN PARIS.

(Concluded from page 401.)

My next visit was to the Jardin des Plantes, the horticultural portion of which presents much that is worthy of notice by English gardeners. Scientific men of European celebrity have received their education at this place. The gardens were laid out in the year 1635, and Buffon, the celebrated naturalist, became director, in 1732. The animals preserved at Versailles were transferred to this place, and the collection has now become very numerous. The bedding-out is extensive, and like all other gardens which I saw about Paris, is on the mixed system. Great numbers of bulbs and annuals are grown here. The conservatories, which are large and very old-fashioned, contained numerous Palms, Camellias, Oranges, &c.

Not far from the Jardin des Plantes is the great wine market, near the Bordeaux new railway, occupying many acres of ground.

I next called on M. Charles Verdier, the celebrated Rose grower, Rue de Marché aux Chevaux, and was fortunate in finding him at home. I was shown all over his extensive grounds, in which are vast numbers of Roses, principally on their own roots, Gladioluses, Pæonies, and other nursery stock. In the houses are large numbers of young Palms.

Next day being Sunday, I went to the Madeleine church, and afterwards by train to Versailles. In order to see as much of the country as possible, I mounted one of the third class carriages, which are fixed on the top of the second class. The embankments by the side of this line are planted with choice trees and shrubs, and their effect is delightful, offering a remarkable contrast with what we usually see in the eastern counties of England. From this railway may be seen hundreds of acres of vineyards. The Vines are about 5 feet high, and about the same distance apart, but the crop was gathered at the time I passed. Large vegetable gardens may also be seen from this line, but the cultivators are not very particular about keeping down weeds.

About six or eight miles from Paris the country begins to present a more picturesque appearance. Fine woods with the foliage of various shades of red, yellow, and brown, and beautifully undulated ground, with little villages in the valleys, and elegant châteaux on the tops of the hills, afforded a striking contrast to the country from which I started. Just beyond the station of Puteaux, the line traverses elevated ground, and affords an

extensive view of Paris, the valley of the Seine, and the Bois de Boulogne. Mont Valérien, the base of which is skirted by the railway near the station of Suresnes, rises to a height of 600 feet above the Seine, and commands a magnificent view. The train next stopped at St. Cloud, and I regretted not having time to see that fine place. Having passed several more stations I arrived at Versailles, and after a pleasant walk of about half a mile reached the palace. Oh! what a palace—what grounds—what fountains—and what pictures.

The garden front of the palace is 2400 feet long, and the grand fountains on the top terrace are in proportion to the vast building. Fountains may be seen in every nook and corner, and in straight lines as far as the eye can see. I understood that the underground work, where all the water-pipes are laid, is almost as wonderful and extensive as the works above. I forget how many fountains there are, but it was to this place that the late Duke of Devonshire sent Sir Joseph Paxton to learn all he could before operations were commenced at Chatsworth. The long avenues which run in every direction, and reach as far as the eye can see, are magnificent, and when once seen will never be forgotten. One of the terrace gardens is all Box-work, the opposite side being planted with flowers. There is not so much real flower garden here as I expected to see, and in what there is Pelargoniums and other bedding plants generally used in England are all mixed in the beds. The pictures in the palace are a most extraordinary sight, and if placed in one straight line I was told they would extend eight miles in length.

It was stated that 35,000 people were in the grounds at the time of my visit. I must confess that I was much surprised to see the way in which Sundays are spent in France. I saw men ploughing, the opening of sewers, the building of houses, shops all open, all sorts of goods carted through the streets, and dancing, card playing, &c., in the evening.

In looking over my notes I find there are several memoranda which I have missed, one of which is, that I saw at the Luxembourg gardens some hundreds of the common sparrow, as tame as barn-door fowls. It was a pleasing sight to me to see some of my old friends so tame, unmolested, and well cared for. They are well fed by the public, and on one old gentleman they alight on his arms to be fed.—J. PERKINS, *Gardener to Lord Henniker, Thornham Hall, Suffolk.*

WHEN IS THE STONING PERIOD?

Will you give me some definite idea of what is meant by the common phrase "the stoning period" of Peaches? Assuming a Peach to bloom on the 1st of April, and to be ripe on the 1st of September, when may this stoning period be expected, and how long does it last?—G. S.

[The time of stoning with Peaches varies according to the season, and the time of perfecting the stone also varies; but as to the fact, there need be no doubt. After the flowers have fallen, and the fruit has set, it will swell gradually until it is about the size of a Walnut, and then for a time swelling will cease; and it is well not to over-excite the trees at that period. On examining the fruit you will find the stone is forming, and until that is firm and hard there will be little swelling of the fruit, but as soon as the stone is hard the fruit swells fast to maturity.]

NOTES AND GLEANINGS.

THE next GARDENERS' EXAMINATION by the Royal Horticultural Society is to commence on the 17th inst. Candidates for the Associateship of the Society must previously have passed a preliminary examination by the Society of Arts; but any candidate recommended by a Fellow of the Royal Horticultural Society, or by the Director of a public garden, may compete for certificates.

—MESSRS. SUTTON & SONS, Reading, have received an official announcement that the jurors have awarded them the only silver medal for seeds in Group IX., classes 84 and 85. Their contribution included a most complete collection of Grasses, both seeds and dried specimens; also samples of agricultural, horticultural, and floricultural seeds.

WORK FOR THE WEEK.

KITCHEN GARDEN.

CONTINUE to trench, dig, and ridge every foot of ground at liberty when frost permits. This is particularly to be observed

in gardens where the soil inclines to a clayey texture. If frosty weather set in let the necessary manure for the whole of the spring cropping be wheeled out, laying it in heaps, either on the spot, or as near to it as possible. That portion not required for immediate digging in should be piled up in small mounds, with soil placed over them to prevent loss by evaporation. *Storing Ice*—Whether ice is stacked, or in a house, the first matter to be attended to is to promote the escape of the ice-meltings. These must quickly pass, for if allowed to accumulate they will counteract the benefits from all other arrangements. There must be a good drain, and this drain should possess what is termed a "trap," and, if possible, terminate in water. The next question is whether the ice should be kept above or below ground. I consider that there is little necessity for going below the ground level, except in peculiar situations. I am persuaded that Mr. Fortune's description of the Chinese ice-houses is tolerably conclusive on the subject. Here we find no excavation, no shade of trees, and the houses situated in fields under an irrigating system; all this, too, beneath a Chinese sky, described by Mr. Fortune as "clear, fierce, and burning." It must be remembered that the walls (mud and stone), are uncommonly thick, and a Bamboo roof is raised over the whole and thickly coated with thatch. I am of opinion that small ventilating doors or windows, one at each side near the top, will be found beneficial rather than otherwise, for I take for granted that a cloud of vapour floats over the surface of the ice at all times when closely confined, and if so it must be very prejudicial. Such ventilators should not be opened too often, nor for many hours at a time, or it will be but exchanging one evil for another. Mr. D. T. Fish, when at Broke Hall, adopted the very simple and effectual plan of preserving his ice in an excavation dug out under the shade of trees and protected with litter.

FRUIT GARDEN.

Pruning the leading shoots, in order to give the required form to trees against walls, was explained last week. It now becomes necessary to advert to the management of spurs formed along the branches. In the Pear and Apple tree fruit-buds are sometimes formed directly on the two-year-old portions of the branch. When such is the case nothing is necessary with regard to them, except a little thinning if there should be more than the branch can bring to perfect fruit; but it is more frequently the case that, instead of a completely-formed blossom-bud, only a tapering spur is produced, and it frequently goes on elongating for years. Part of these spurs should be shortened to within a quarter of an inch of their bases, whilst the greater number should be allowed to remain untouched. If, instead of spurs, shoots have been produced, they must be cut back to within an inch of their bases, and some where numerous still more closely. Older spurs should be shortened down to the lowest fruit-buds, taking care, however, not to cut too near the latter. Keep the fruit-buds in view, and endeavour to remove as far as possible whatever is in front of them. Where there are old neglected spurs producing only a crowded mass of foliage, without fruit, they had better be thinned and well cut back, and by attending properly to summer-pruning fruitfulness will be induced.

FLOWER GARDEN.

In favourable weather forward all out-door work as much as possible. Trenching ground and planting evergreen shrubs should still be carried on with activity in case the ensuing spring should prove unfavourable. Look over seeds collected during the past season, and, previous to storing, clean them when the weather is wet. No time should now be lost in affording protection to tender Roses. The tops of standards worked on ordinary stocks may be protected by wisps of straw bound amongst and over their branches, or by tight canopies firmly fixed. Beds or masses of Hybrid Perpetuals, Teas, or other tender kinds, should have some porous material strewed amongst them to protect the collar. The coarse particles of old exhausted tan, clean riddled, are very good. New sawdust may also do, or even a good coating of half-decayed leaves. Four or five inches of such materials will at least render the collar safe in the event of a very severe winter. If it is desirable to protect the tops altogether, mats thrown lightly over them, covered with straw, will suffice, taking care on the breaking up of frost not to uncover the trees until completely thawed, and not to uncover them suddenly even then, leaving a very light screen of straw on them for a day or two, in order to inure them gradually to sunlight.

GREENHOUSE AND CONSERVATORY.

In frosty weather the conservatory will require very careful

management; some rather difficult problems have to be worked out. Atmospheric humidity cannot be entirely dispensed with, yet this, if not nicely managed, will produce drip, and such, it need scarcely be remarked, is most prejudicial to the delicate texture of the Camellias and other gay plants. Of course, if the exterior of the roof has no covering ice will gather on the glass, and in melting will drop through the laps. The best plan is to maintain as low a temperature as can possibly be allowed, say from 40° to 45° at night, and to leave a little air on at back all night. With a good roof-covering a temperature of 40° would be ample, and then there would be sufficient atmospheric moisture at all times without the special application of water. In the greenhouse let the young stock of Heliotropes, Scarlet Pelargoniums, Persian Cyclamens, and other flowers grown specially for winter, have light situations and regular attention as regards watering. To Ericas pay close attention as to watering; if unfortunately placed near flues or pipes they may become suddenly very dry. Keep up a quiet ventilation day and night if possible. Let the air steal in moderately, and dispense with strong fires, or, indeed, fires of any kind when the temperature can be kept within the proper limits without them. Do not water the Pelargoniums until they are thoroughly dry.

STOVE.

Little can be added to the directions given under this head. It would be well, however, to remind the amateur especially, that he must be exceedingly cautious not to overheat the house, as this would cause the plants to start into growth—a result which would be very injurious at this season.

FORCING-PIT.

This is a good time to introduce the following subjects, provided, as before observed, they have received the necessary treatment during the summer—viz., Rhododendrons, Azaleas, both American and Chinese, Persian Lilacs, Sweet Briars, Moss and Provence Roses, Crimson Perpetual Roses, Ledums, Kalmias, Anna Boleyn Pinks, Wallflowers, and Dutch bulbs. Unless, however, they are in proper trim the labour will be in vain, and no mode of forcing or form of pit can compensate for any defect in this respect. The great secret of success in forcing them, if the heat is wholly composed of fermenting material, is to keep down accumulating damp and mouldiness by an almost constant ventilation, increasing the linings in order to raise the necessary temperature. Those who possess tank houses or pits will adopt a somewhat different course. Such will scarcely need advice.

COLD PITS OR FRAMES.

We have had about a week of wintry weather near London, during which the thermometer has several times indicated from 10° to 12° below freezing-point. Keep a watchful eye over the store pots, and remove damp leaves as soon as they appear. It would be well to pot off Calceolarias that have rooted into smaller pots should the weather become fine. Give air and water as formerly directed.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

WHAT changeable weather! The drenching rains and high winds of Sunday, December 1st, succeeded by a keen frost on the Monday, the thermometer falling before evening to 12° below freezing point. We were rather unprepared for such a sudden frost after such rains, and, therefore, the first work in the morning of Monday, was to give protection to many subjects that otherwise would have been injured. Most of these, as Celery, young Cabbages, Cauliflowers under hand-lights, Lettuces, Endive, &c., under protection have been almost left to themselves up to the 7th, which is also a very stormy day. Some glass frames covering cuttings of Calceolarias, and others large plants of Cinerarias, but without any heat, had merely the covering partly removed, and wholly removed on one sunny day, to permit of the plants being dried. Strawberry plants in pots out of doors, were well covered over with litter and let alone for the week. In such boisterous weather, hail, snow, wind, rain, and frost alternating with each other, the constant covering and uncovering would have been little else than labour thrown away. Wherever there was heat enough to promote extension of growth, there exposure to light was indispensable, as well as all the air that could be safely given to prevent weak spindling growth. But wherever the plants are so situated as to be only a few degrees above freezing, so cold, indeed, that there will be no extension or progression; then, in that case, plants

may be covered up for a lengthened period without injury. The coolness, however, in such a case is the great point of safety. Hence, in cold weather in winter it is well to let Cauliflower plants be crusted with the frost before they are covered up, and then they will not be injured by a week or even a month of darkness; and they being slightly crusted with frost, and the ground crusted on the surface, fewer visitors will come to prey upon them. Our great dread for all covered-up and protected vegetables is of rats and mice, especially the former. It is vexing when you see the hearts nipped out.

A press of work had prevented us taking up all our Beet, and fearing it might be injured, we threw some litter over the bed and then took it up in the middle of one of the best days. Of Celery, we lifted a few scores, in case of frost, but our beds are so well protected that it will require an unusually severe frost to do much injury.

Put a lot of *Asparagus* into a mild hotbed, and, as we wished to clear the ground, placed a lot of roots in a shed, covering them with earth and litter, to come in successionally, for when the supply is not over-abundant it is bad policy to have a glut at one time and then none afterwards. Put in also more Sea-kale and Rhubarb, and made-up a fresh piece in the Mushroom-house. To produce a moist heat turned in a load or two of droppings on the floor, which will do no harm, as the beds in bearing and coming on are slightly covered. Secured, also, a few barrowloads of Swedish Turnips under cover, as the blanched tops in the Mushroom-house make an agreeable change with Sea-kale, Brussels Sprouts, and young Cabbages. Put, also, a good supply of Mint, Fennel, Tarragon, &c., into pots to be placed where there is a mild heat. We find these do rather better in pots than when planted out in mild hotbeds. Looked over roots in their shed, and made it a point this stormy Saturday to secure from an anticipated frost. The barometer kept so well up notwithstanding the high boisterous winds, that we thought it more than likely that when a little snow fell and the clouds dispersed we should have a clear atmosphere, in which there would be a great radiation of heat from our earth, and that the consequence would most likely be good ice for the ice-house in the beginning of the week.

As we have alluded to the matter of protection, we may here prominently notice the complaint of a "TROUBLED ONE," who is perfectly perplexed with the contradictory advices he receives in the various journals on this point, one telling him to uncover as early as he can, and others, like ourselves, making uncovering a secondary matter in severe weather. Now, as already alluded to, we would say, we have no objection to uncovering everything for a short time every day, provided there is time for it, and the covering is put on again soon enough to prevent all injury. The very moving of the covering will do good, as breaking the lines of direct conduction and radiation of heat. What we wish our inexperienced friends clearly to understand is, that a continued thick covering during the day will only injure those objects where they are placed in a temperature sufficiently high to make them grow. Even when the temperature shut in is not high enough to make them grow much, as 40° and a few degrees less or more, that heat in places banked-up will often cause an accumulation of moisture on the foliage which would not be good for it; and in that case, either uncovering, or a little air given when the external air is a few degrees above the freezing point, will be of importance, so as to dry the foliage in some degree. In all cold frames and pits where the object aimed at is to exclude frost, we believe that continued daily uncovering in cold, dark, frosty weather is little better than labour thrown away; but when covering is continued for several days, or several weeks, it is absolutely essential that the plants covered up should be in an atmosphere cool enough to prevent growth, and warm enough to prevent frost penetrating. This desirable point of safety may be set down at from 34° to 38°, and even 40° if the latter heat is not too long continued.

We have had *Culceolarias* shut up for seven weeks in a temperature ranging from 33° to 37°, and when the weather changed they were as good as the day they were covered up. If the temperature had been from 45° to 50°, or more, we should have expected so many spindling wrecks; and so of other things. However, we have no fault to find with those who take the litter from their Cauliflower lights, &c., every day, be it as rough and as cold as it may. We only show that a different plan may be adopted with advantage in continued cold weather, and, provided the plants are cool under the protection, it matters little whether they have a night of sixteen hours or a longer one of a hundred hours or more.

We took the opportunity of proceeding with some kitchen garden work, and especially wheeling manure to places where it would be wanted in frosty mornings and frosty days. Unless in severe frost, scattering a little litter over the ground or walks to be wheeled on prevents the walks being so much marked by the barrow-wheel as would otherwise be the case, and keeps the wheel much cleaner; therefore, when the work is done the walk is much more easily cleaned up. It is always of importance in doing work to avoid making more work out of it. Even in picking leaves from plants much is gained by placing the leaves at once in a pocket, apron, or bag, instead of, as many have a pleasure in doing, throwing them down on the path or floor, and picking them up again.

Took also the opportunity of the cold weather and a north wind driving smoke away from the garden and mansion, to char and burn up a lot of rubbish, and root and seed weeds, that we would not have wished to find their way to the rubbish-heap, which, after heating and steaming and being covered with earth, would all be carefully restored again to the ground. In covering our burning and charring-heaps we used large quantities of material from the flower garden, the beauty of which, after the 2nd of the month, was completely destroyed. A large heap of rough charred refuse, and of other still rougher materials, and weeds, and lots of old earth, parings of walks, clay, &c., reduced to ashes, make excellent dressings, and especially exercise a mechanical influence on heavy soils, whilst the roughness of the materials and the salts which they contain are useful for keeping all slimy enemies from growing crops. When turning over into heaps the collections of a twelvemonth for this purpose, all prunings and pieces of wood useful for burning and for lighting fires are placed aside under cover. Where many fires have to be looked to it is very pleasant to have such a pile, or even a heap, of dry chopped small wood to go to; and the prunings of Apple, Pear, and other trees and shrubs, after lying in a heap for the most of the summer, come in thus useful in winter, and can be chopped up in a shed during bad weather.

FRUIT DEPARTMENT.

Besides protecting Strawberry-pots from the weather, as it was rather cold to do much out of doors, our chief work was to syringe our late orchard-house—trees, woodwork, and all together, with soft soap water at a temperature of from 160° to 180°, as hot as it well could be put on. In doing this we had the house shut to keep the steam of the soft-soap water in. We did the same with the trees on the back wall in another house, but we were obliged to confine our operations to the back wall, and also to open the top ventilators to let the steam out, that it might not affect a lot of Grapes still left in it. We worked this wall, syringing both ways, backwards and forwards, so that every hole and cranny in the wall was filled with the soap water before setting a number of plants for partial protection in these houses. We have long been convinced that such proceedings as these, when the trees are in a dormant state, save much trouble and labour with insects afterwards. These large houses hardly troubled us with an insect of any kind during the summer; and we should hear less of the wonderful powers of some insect destroyers did we act more on the principle of prevention rather than of cure.

Provision may now be made for spring planting, and it is a good time for procuring stores of loam and compost, when the frost is not too severe, as it will be all the better of the frost. It is bad policy, however, in forwarding work, making new lawns, &c., to dig or trench down frozen soil, as it will not only be a long time in becoming heated, but such frozen soil will also sink very unequally.

ORNAMENTAL DEPARTMENT.

We must refer to last and previous weeks for general directions and operations. We have already alluded to the flower garden, which is not yet quite cleared of its summer occupants, but which will be attended to ere long, as they are all eyesores now. We almost envy those who have long cleared, dug, and made all neat and pleasant-looking. To those who like ourselves have most of this digging to do, we would say, where not filled with bulbs and other plants, dig or trench the ground deeply, and leave it for the air to mellow it; but if the subsoil is not to your wish, loosen it, and leave it there. Could we manage it, we would turn over such ground frequently in ridges during the winter, and what manure we gave we would lay on these ridges at the last turning over, so that the rotten manure should be thoroughly sweetened by exposure. Then in digging and levelling finally, we would keep this manure near the surface. These are our reasons—the deep stirring is not only to

permit of deep rooting, but of plenty of moisture for the roots in dry summers, whilst in wet seasons it allows the superabundant moisture freely to escape. The exposure of the manure to the atmosphere when general, is contrary to the best agricultural practice, and were we manuring for Turnips, we would not like our manure, juicy and well made, to be exposed to the air, but turned under the soil as soon as it was taken to the field, so that the air should not carry off, as it so often does in field culture, the best and most nutritive parts of the manure. In fact, much of the dung taken to fields acts as little more than a mere mechanical agent, the better portion having escaped before it is covered with the soil. But in our flower gardens we rarely want rampant growth like that we desire in a Turnip, and, therefore, though we wish to give a little help, we sacrifice so much of the nutritive qualities of the manure, in order that we may secure a greater degree of sweetness from atmospheric exposure. And then, again, as most of our plants are inclined to become rather strong towards the end of summer, and would grow stronger still, if the roots were encouraged to go down after manure lodged deeply, we keep the sweet manure chiefly at the surface, that quick-rooting after planting out may be encouraged, and that the poorer soil beneath may not encourage too rampant growth. Of course, when strong growth is the object, then we must reverse the above practice.

As lately alluded to, dryness in cold pits and frames must now be aimed at, and in greenhouses and conservatories no more water should be given than is absolutely required, and none be spilled, as the less raised by evaporation the less will be condensed to fall as drip. The latter is greatly prevented by giving a little air at top early, or leaving a little on all night. We had a lofty house in which the flowers used to be washed by drip, and we greatly improved it by fixing some squares of zinc at the apex raised a little above the glass, and the sides perforated with small holes, these being open night and day, summer and winter.

Chrysanthemums, Salvias, Cinerarias, Camellias, &c., must not suffer for want of water, but they should not have it before they require it. Heaths will need plenty of air in mild weather, but it is better to give little air than much fire heat. Epacris will stand more heat. Pelargoniums should be kept near the glass, and the most forward should be shifted after Christmas, but then they would be the better of 5° more heat than would suit the general greenhouse.

In the forcing-pit, or house, the great object is to bring on plants gradually, and in the stove, while all plants in comparative rest are kept rather dry, plenty of water with the chill taken off, so as to be in temperature about 70° to 80°, should be given to Ferns, Begonias, Eranthemums, Justicias, Poinsettias, and Euphorbias, but care should be taken not to syringe more, and to use no more fire heat and moisture, than can be avoided. In cold weather it is better that the house should be at 55° than at 70°, or higher, with fire heat. A rise of 10° or 15° from sunshine with just a little air to prevent accumulation of vapour, is very different from a high temperature from fire heat.—R. F.

TRADE CATALOGUES RECEIVED.

William Pontey, Huddersfield.—*List of Forest Trees, Ornamental Trees and Shrubs, &c.*

T. Cripps & Son, Tunbridge Wells.—*Catalogue of Nursery Stock.*

William Chater, Saffron Walden.—*Catalogue of Hollyhocks and Roses.*

COVENT GARDEN MARKET.—DECEMBER 11.

A SHARP frost for a few nights has to some extent stopped our supplies, and a few articles in daily use have advanced in price in consequence of it; but the growers' stands were hardly cleared yesterday morning. Potatoes have been much inquired for, good samples making £9 per ton.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	2	6	4	0	Melons..... each	2	0	3	6
Apricots doz.	0	0	0	0	Nectarines doz.	0	0	0	0
Cherries lb.	0	0	0	0	Oranges..... 100	5	0	10	0
Chestnuts bush.	8	0	14	0	Peaches..... doz.	0	0	0	0
Currants ½ sieve	0	0	0	0	Pears (dessert) .. doz.	2	0	4	0
Black doz.	0	0	0	0	Pine Apples lb.	4	0	6	0
Figs doz.	0	0	0	0	Plums ½ sieve	0	0	0	0
Filberts..... lb.	1	0	0	0	Quinces doz.	2	0	3	0
Cobs lb.	1	0	0	0	Raspberries lb.	0	0	0	0
Gooseberries .. quart	0	0	0	0	Strawberries lb.	0	0	0	0
Grapes, Hothouse.. lb.	3	0	6	0	Walnuts..... bush.	10	0	18	0
Lemons..... 100	8	0	12	0	do. per 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes..... doz.	0	0	0	0	Leeks bunch	0	3	0	0
Beans, Kidney ... 100	0	0	3	0	Lettuce per score	1	0	1	6
Beet, Red..... doz.	2	0	2	0	Mushrooms bottle	2	0	3	0
Broccoli bundle	0	6	1	6	Must.& Cress, punnet	0	2	0	0
Brus. Sprouts ½ sieve	2	0	2	6	Onions..... per bushel	3	0	5	0
Cabbage doz.	1	4	2	0	Parsley..... per sieve	4	0	5	0
Capsicums..... 100	2	0	3	0	Parsnips doz.	0	9	1	6
Carrots..... bunch	0	6	0	8	Potatoes..... bushel	3	6	5	0
Cauliflower doz.	3	0	6	0	Kidney do.	3	6	5	0
Celery bundle	1	0	1	6	Radishes doz. bunches	1	0	1	6
Cucumbers..... each	1	0	2	0	Rhubarb bundle	0	0	0	0
pickling doz.	2	0	0	0	Savorys doz.	0	0	1	6
Eodive doz.	1	0	0	0	Sea-kale basket	0	0	3	0
Fennel bunch	0	3	0	0	Stallots lb.	0	8	0	0
Garlic lb.	0	8	0	0	Spinach bushel	4	0	5	0
Herbs bunch	0	3	0	0	Tomatoes..... per doz.	2	0	3	0
Horseradish .. bundle	2	6	4	0	Turnips bunch	0	4	0	0

TO CORRESPONDENTS.

*** We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

BOOKS (Constant Reader).—Its price is 2s. (Heaton Hall).—The volume now in the press will contain plans of all descriptions of gardens, the formation of their various parts, culture of bedding plants, &c.

BACK NUMBERS (T. J. Keeling).—We cannot say whether we can supply you with the missing numbers unless you inform us which those numbers are.

PRUNING ROSES WHEN PLANTING THEM (J. R.).—"With regard to pruning Roses at the time of planting, I agree with Mr. Cant, who is an experienced cultivator and first-rate grower of Roses, that it is best not to do so then, or for some little time after. The tops of the shoots contain sap, which subsides down to the lower wood, and helps in the case of immature lower wood to consolidate it, or keep the skin from withering. No doubt, where wood is ripe, you may cut at once; but if you do so the tree will 'break' before the spring frosts are over. I wish those who require questions to be answered would distinguish between Briar and Manetti Roses. Roses on the Briar, whether for poles, walls, or standards, require to be cut very hard the first spring; and for want of this, among other reasons, so many Briar Roses fail or do badly. Manetti Roses require only to be tipped, thinned out, and to have the side branches shortened. Roses on the Manetti may be pruned as soon as they have 'taken,' and also after the blooming season is over. All mine on the Manetti stock, fresh planted, or otherwise, have been shortened a little, thinned out, and skeletonised. They will want but little spring pruning. Rose buds on the Briar are best protected with dry straw or reeds, so as not to exclude air. The protection must be removed as soon as danger is over.—W. F. RADCLIFFE."

ROSES ON THE MANETTI STOCK (Q. Q.).—"I want information on the subject of summer-pruning in order to insure a good second bloom. Are the shoots that have bloomed to be cut back and stimulated to fresh efforts with liquid manure? Do not cut the tree back, but thin out useless wood, and apply liquid manure; and also in hot, dry weather give the plants plenty of water over the leaves and roots. If trees are required to bear two or three seasons of blooms in a season, of course the manuring must be in the same proportion. Apply the same rule to plants as you do to animals: feed them according to the exertions required. 'When Roses make long shoots like Charles Lefebvre and Marshal Vaillant, are these to be cut in order to procure flowering shoots? How late in the season may this pruning go on?' The question is answered in my article in page 273, on 'stopping gross shoots.' If gross shoots show no sign of bloom-buds (feel the extreme tips of the shoots with your finger before you amputate, and see if a little 'spavin' is forming), cut the shoot back below the red skin down to a full eye on the green skin, or hard wood, and then the shoot will 'break,' and probably form bloom-buds. If it do not form bloom-buds the operation will tend to consolidate firm bearing wood for another year. 'How late in the season may this summer-pruning go on?' Much depends on the climate and the sort of Rose. General Jacqueminot will do in six or seven weeks, or less, what it will take Duchesse d'Orleans eight, nine, or ten weeks to do. 'Q. Q.' will, by observation of sorts and knowledge of his climate, best know how late it is useful to cut back for prolonging the blooming season. It is of no use producing buds for the frosts. 'Does it injure Hybrid Perpetuals to cut them back?' It is injurious to cut them back before the first flowers have dropped, because it hinders maturation of the wood. The second series of blooms and wood may be cut off, or back, at any time without injury. I found in 1860-61 the Roses that had no flowers cut off during the season, or till the first flowers dropped, wintered admirably; but the same sorts that were backed for bouquets and exhibitions died, or suffered severely. If we were sure of a fine autumn, cutting off the first wood and flowers of the year would not so much signify. Summer Roses form their next year's wood after flowering is over. 'How should Roses on Manetti stocks, 2 feet high, be treated?' They cannot be buried over the point of union. Would Mr. Radcliffe consider it a good plan to keep the stems enveloped (nine are chiefly against a S.E. wall), during summer in moist moss? It is the only plan. Score the tree with your knife on three sides, from the base to the top, every spring. The stock by exposure indurates, and becomes hide-bound, and as hard as an iron bar. The Manetti stock itself, with no Rose on it (half standard), will grow well and become rampant. That is curious, but true.—W. F. RADCLIFFE." (H. J.).—"Roses on the Manetti stock must be covered over the point of union. Four inches above the ground are too high to bud Roses on the

Manetti stock, especially if the part from which the roots take their rise is far removed from the surface. As your *Rosa* is placed against a wall it is probable that it will strike on its own roots. If it do not do so it will be well to keep the ground stirred, so as to admit the warmth of the sun and air to the roots. *Junno Desprez* is a pretty Ten-scented *Noisette*, and a rampant grower, and I hope you have given it a wide berth. It must be cut very little. It is not up to the times, and a wall would have been much better devoted to *Solfatero*, *Maréchal Niel*, *Celine Forestier*, *Triomphe de Rennes*, and *Gloire de Dijon*, all notable yellow *Roses*, and abundant bloomers through the season, beginning against walls as early as May, and blooming till stopped by the winter.—W. F. RADCLIFFE.

COMMENCEMENT OF WINTER (M.).—The season commences on the 22nd of December. You will find it so stated in the "Year Book" and in "The Gardeners' Almanac" for 1888.

PRESERVING GRAPES (R. B. S.).—Dipping them in lime water must be very objectionable, for it would not adhere to them unless the bloom were first rubbed off, and then a great beauty is taken from them. If the lime did adhere, we do not think it would preserve the Grapes longer than they can be preserved without it. They may be kept for months if hung, stalk end downwards, in a cold, dry, dark closet.

MAN OF KENT.—We remember the signature, but cannot find any letter. The insect you sketched we think is the red spider.

WALTONIAN CASE (H. Evans).—You had better advertise it, stating particulars.

VARIOUS (G. M. D.).—There is a demand for forced Strawberries, and they pay if grown skillfully. They do not bear travelling a long distance. No doubt *Celine* would answer as a stock for some *Roses*; but no one, unless it has been tried, can say which. We do not think a fortune would be made by growing Manetti stocks for the trade.

HEATING BY GAS (W. G. W.).—In our No. 341, published on the 10th of October, are plans of all the modes of heating by gas. The last stove mentioned there would, probably, suit you.

HEATING A SMALL GREENHOUSE (W. W.).—We think that in your small house you could have made your line give you all the heat that would be necessary; but as you have a boiler it will be as well to use it. We do not quite understand your proposed modes of using your two inch pipes; but we can see that so many curved lines will be very awkward; and we think you labour under some misconception as to the supply-cistern, taking the flow and return there through stacks of pipes, &c. Now, to make the matter as simple as possible, we will remark that the two inch pipes you have will answer your purpose; they will heat more quickly and cool more quickly than larger pipes. They may be placed above each other, with a socket joint at each end; but the best mode would be to have three or four of these pipes on the level, and one as the return pipe, either on the same or a lower level. One of these sets you could have for top heat, and one for bottom heat. If you wanted top heat and bottom heat at the same time, then all you would have to do would be to have a T-piece at the top and T-piece at the bottom of the boiler, and from the top take your two-inch flow into each branch, and from the farthest end of these branch stacks of pipes bring a pipe back to the T-piece at the bottom. However you arrange it, your flow pipe must come from the top of the boiler, and your return pipe must have access to the bottom of the boiler. By the above mode, with a supply-cistern higher than the pipes, and communicating with these pipes, or, better still, with the bottom of the boiler, you would need nothing but a gas pipe open to the air at the farther end of your stack of pipes. If you resolved to have it in your power to heat only one of these stacks of pipes at a time, then you would require to have a valve on each branch of your T flow pipe; or you may take a single flow pipe from the top of the boiler direct to a supply-cistern, and from thence take a flow into each stack of pipes, to be put on or shut off at pleasure by plugs. Of course, in that case, the return pipe from each stack must go to the bottom of the boiler. If your stack of pipes is all on a level you will obtain more heat from them. Suppose you had four pipes altogether, then your flow must enter into a flange or socket containing three pipes, the farther end must have an open socket for four pipes, and the fourth will then form the return, and, supported at the near end, must go from thence to the boiler. We are thus particular because not long ago a place was nearly blown up because it was not considered necessary to take the flow pipe from the top and the return pipe to the bottom of the boiler.

FERN (A. Rose-shire Gardener).—We cannot enter into details; time would not suffice to do more than name plants. The causes of sporting are various and very obscure.

MELON-HOUSE (E. S. C.).—In vols. 7, 8, and 11 are plans of Melon-houses and full cultural directions.

WALLS (An Old Subscriber).—The notes on walls are on page 497 of vol. ix., First Series. Recommendations will often vary with the practical men consulted, and a slight difference in the heights and breadths is not productive of serious consequences.

TAINTED WATER.—"At page 426 Mr. R. Fish wishes to know what will cure the bad smell of tainted water in a large tank. In a similar case I have found putting well-charred pieces of wood (charcoal) very effectual, to be put in in large pieces, and to remain in.—D. H."

PEACH TREES INFESTED WITH RED SPIDER (An Old Subscriber).—Dissolve 8 ozs. of soft soap in a gallon of tobacco water, and add sufficient sulphur to bring it to the consistency of paint; then paint the trees in every part with the mixture, using a brush, being careful not to dislodge the buds. The dressing ought to be done before the buds begin to swell, and the whole of the woodwork and every part of the house should be thoroughly cleaned; the woodwork with soap and water, taking care not to allow the soapy water to touch the glass, which should be cleaned with water only. The walls should be whitewashed, adding 1 lb. of flowers of sulphur to every gallon of whitewash. The mixture of soft soap and sulphur which you used last year was, no doubt, too strong for the trees, and might cause the buds to fall; but the severe attack of red spider was in itself sufficient to make them fall. The trees should have a moist atmosphere, and be properly supplied with water at the roots, during the growing season.

PEARS ROTTING AT THE CORE (H. N. L.).—The evil you complain of is probably due to the variety, and we do not know how you could prevent it, unless placing the fruit in a dry room with a temperature of 40 to 45° would answer. The roots being near the surface, it will be well to top-

dress the soil with a rich compost, as one consisting of turf cut 2 inches thick, and chopped, enriched with an equal bulk of fresh manure. A dressing, 8 inches thick, may now be applied, the surface being previously scraped off down to the roots, and the old soil taken away.

CUTTING OFF PENTSTEMON STEMS (Fairy Footstep).—It is not good to cut off the stems of these plants at this season; but for the sake of neatness any old flower-stems and decayed foliage may be removed. The stems are much better left on, for they serve as a kind of protection to the plants in severe weather.

HOTBED FOR CUCUMBERS (A Young Beginner).—You ought in January to procure a quantity of fresh stable manure and throw it into a heap, sprinkling it with water as it is being mixed, if it is at all dry or strawy. When it has begun to heat and becomes quite warm you ought to turn it over, putting the outside to the inside, and otherwise thoroughly mix it, giving it a good watering. After ten days or a fortnight it will have become hot, and will have parted with a quantity of rank steam, when you may mark out a space 1 foot wider than the frame all round, and make up a bed 4 feet high in front and 5 feet high at back, the dung being well-shaken out, beaten down, and soaked. The frame and the lights may then be put on, drawing the latter on closely. When the heat has risen in the bed the lights may be taken off, and the frame also if the bed has settled irregularly, in which case the bed should be made even by the addition of more dung. The frame and lights may then be replaced, and when the heat becomes strong and a quantity of steam rises in the frame, the lights should be left open a little at back to allow it to pass away. A stout stick or small stake ought to be thrust into the bed from the back immediately under the frame, and should enter the dung about 2 feet; by drawing out this stake and taking hold of it with the hand at the end farthest in the bed, you will be able to tell when you may put in the soil, and that is when the stick can be held in the hand comfortably. A barrowload of rather strong turfy loam may be placed under each light, the whole of the bed being covered with about an inch of soil, and the remainder piled up under the centre of the light in the form of a cone. The soil ought to be dry rather than wet. In three or four days you may plant the Cucumbers, they having previously been raised in another hot-bed, which need not be made so high by a foot, and that should be made three weeks sooner than the bed in which the plants are to be planted. The seed should be sown in light soil in pots, and kept just moist. When the plants are showing their rough leaves pot them off singly in small pots, putting them in quite up to the leaves, and using some soil that has been placed in the frame a few days previously to become warm. Water carefully, and always with warm water. When the plants have made two rough leaves take out the joint with a knife, and in a week or ten days they will be fit to plant out in the fruiting-bed. For the raising of the plants the bed need not be covered with more than an inch or two of soil. A good Cucumber for general purposes is Telegraph. Kirkless Hall Delance, and Berkshire Champion are good, the latter if a Cucumber be wanted often.

EARLY POTATOES (Idem).—A ridge made the same as a ground viney, and covered with oiled paper, would, if placed upon a mild hotbed, furnish you with early Potatoes much sooner than you could have them from the open ground without protection. Sheets of newspaper will answer well if coated once with linseed oil.

ANNUALS IN POTS (Dolores).—Your annuals in a cold frame ought to have the pots plunged to the rim in coal ashes, and they should have air when the weather is mild and dry, the lights being drawn off entirely; whilst when the air is moist, or the weather wet, the lights ought to remain on, but be tilted at the back to allow of a free circulation of air. In severe weather the lights ought to have a covering of mats thrown over them. The plants may be planted out in the borders in March if the weather be mild, otherwise early in April. After February you should harden them off by drawing off the lights entirely in mild weather, only using them in case of heavy rains and frosty nights.

CLEMATIS (Idem).—*Clematis montana grandiflora* has a larger flower than *C. damulna*, and is no doubt that which you require; but the flowers of *C. damulna* are sweet-scented, and on that account the plant is a great favourite.

CUCUMBERS FOR WINTER AND SUMMER.—MELON FOR EXHIBITION (T. C. O.).—Telegraph and Lord Kenyon's Favourite are good winter sorts; but as you require a large sort, Kirkless Hall Delance will suit you for winter. Dale's Conqueror is probably the finest Cucumber for exhibition, and it attains a very large size—from 30 to 35 inches in length under superior cultivation. A good Melon is Meredith's Hybrid Cashmere, and Mounsdon's Moreton Hall is excellent; but it is difficult to name a single variety for exhibition, as the palm is carried off by different varieties at different exhibitions.

FUMIGATING WITH SULPHUR (D. H.).—The placing of sulphur on red hot cinders or coals, and filling the viney with the fumes, will injure the Vines very much if not destroy them.

PROTECTING FROM FROST (F. M., Sereboak).—Your framework may be covered with tiffany No. 3, fastening it on the frame with zinc nails having large flat heads. A strip of cloth or list placed upon the tiffany and the nails driven through it, will prevent their tearing the tiffany at the nail heads. The strength of tiffany named is excellent for protecting trees from frost; but it ought not to be kept over trees in blossom for any considerable length of time by day, though it may remain over them during frosty periods. Pear trees do not need shade from sun.

RASPBERRY CULTURE (J. D. M.D.).—Of the poor, thin, short canes, twenty or more to each stool, all which bore fruit this year ought now to be cut off close to the ground, and the canes of the current year's growth should be reduced from twenty or more to six of the strongest, pulling up by the root as many as you can without injuring those left, and those you cannot pull up may be dug up; but if they come from the same root-stem as those of the strongest canes retained for fruit next year they should be cut off close to the ground with a knife. This done, you may drive in a stout stake by each stool or root, so that it may be 4 feet out of the ground, and to this tie the canes, making them fast. If they reach above the stakes you may make one tie immediately above the stakes, and shorten the canes to an inch above the last tie. The loose soil should be scraped away from the roots of each, and for a distance of 18 inches all round, not going so deep as to disturb the roots. Place round each stool a dressing of well-rotted manure 2 or 3 inches thick, and give the whole of the space between the rows an equal coating of manure, which

should be neatly pointed in with a fork; but for a distance of a foot round each stool the ground ought not to be stirred, though the dressing may be covered with a little soil in the process of forking over the spaces between the rows. When the shoots appear in summer and are from 1 to 1½ foot in height, make choice of half a dozen of the strongest, and pull up all the others by the roots. By this means we think you will obtain strong canes for fruiting in the following year, and considerably taller than the stakes. When the canes have fruited you may cut them away, by which more space will be allowed the canes for fruiting next year, and they will ripen their wood better from the greater amount of light admitted.

DAMSON TREES UNFRUITFUL (*J. A.*).—Your trees are probably in rich ground, and their roots have penetrated into bad soil. Round each we would dig out a trench 3 feet from the stem, and quite down to the roots—indeed, dig out until below them. We would cut off all roots thicker than a straw, and again fill up the trench. In this way you will, probably, find a difference in the growth in the year following, and ultimately have abundance of fruit.

SIGNS OF THRIPS (*Idem.*).—The signs of thrips are minute white spots on the leaves, and as the insect spreads the spots grow larger, ultimately becoming large blotches, and the leaf falls off.

TRAINING RASPBERRIES (*Idem.*).—The best trellis for training Raspberry canes is one made of wire, similar to those used for espalier fruit trees. The wire (No. 10), should be 1 foot apart, and the first 1 foot from the ground. Five wires are ample. You will require a straining-post and stays at each end, and supports or uprights at every 12 feet, all with holes in at the required height. The straining-posts, stays, and uprights should be let into stones and leaded in, the stones being put in the ground and covered with soil. All should be of iron; though wood will answer, it is neither so neat nor so durable. The trellises ought to be 6 feet apart, and the plants may be planted 2 feet apart. The trellis may be put up at the time of planting, but twelve months afterwards will do.

GOOSEBERRY CUTTINGS (*Idem.*).—Your cuttings struck this year will be eligible for a fresh plantation, only it will be two or three years before they will bear much fruit, and on that account it may be desirable to procure plants that are larger. Your plants will answer well if you can afford to wait until the plants are grown.

TRAIN OIL FOR DESTROYING AMERICAN BRIGHT (*A. E. C. H.*).—The

trees infested may be dressed with train oil, working it into every crevice. Care should be taken to keep the oil from the fruit buds.

PRUNING APPLE, CHERRY, AND PLUM TREES (*Idem.*).—Now is a good time to prune them. The pruning should be performed during mild weather, and from the fall of the leaf to their starting into growth is a good time. Pruning should be done before the buds swell in spring.

STRAWBERRY-HOUSE SEEDS (*J. W., jun.*).—We advise you to place the pots of Strawberries on turf cut 3 or 4 inches thick, and the width of the shelves; but where there are troughs we prefer to fill these with a compost of equal parts of chopped turf and rotten manure. You may force Asparagus in your house as you propose, but not upon the flue, as that would no doubt be too hot and dry. You may have the Asparagus under the Strawberry pots where there is room, the roots being planted in any description of moderately rich light soil, and the crowns covered with 2 or 3 inches of fine soil. The soil should be kept moist. You may also have roots of Rhubarb, which will force admirably; likewise of Sea-kale, the latter of which should be covered with pots to leave the stalks blanched or white.

ACACIA DECURRENS MOLLIS NOT FLOWERING (*E. W.*).—We think your plant would flower more freely if you were to confine its roots more, and not expose it in summer. It would be the better of a cool house from May to September, though you cannot give too much air, light, and room. The wood would be all the better ripened if the plant were kept under glass in summer, and the prospects of bloom would be greater.

SOUTH AMERICAN SEEDS (*J. E.*).—We cannot undertake to name plants unless we see the flowers.

CABBAGES (*R. T.*).—There are too many varieties, mostly dependant upon good cultivation, that are nearly "all heart," for us to distinguish that which you mean.

NAMES OF FRUIT (*C. F.*).—1, Winter Hawthornden; 2, Reachamwell (a Subscriber).—Your Apple is Bedfordshire Foundling. (*A. Y. Z.*)—Your Pear is Bismarck. (*Twelve-years Subscriber*).—1, Beurré de Rance; 2, Beurré Diel; 3, Easter Beurré; 4, Glon Morceau. (*A. Y. Z.*)—It is impossible for us to name plants from such scraps of leaves. A work such as you mention will be published at the beginning of next year. (*A Lover of Flowers*).—The globose fasciated berries, *Habrothamnus fasciculatus*; the obovate racemose berries, *Habrothamnus elegans*. (*X. Y.*)—1, *Lophospermum volubile*; 2, *Glycine bimaculata*.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending December 10th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 4	30.267	30.131	42	21	43	42	S.	.00	Overcast; partially overcast; clear and frosty.
Thurs. . 5	29.894	29.680	47	29	43	42	N.W.	.10	Rain; clear, bright sun; overcast at night.
Fri. . . 6	29.955	29.640	39	28	41	42	N.	.14	Overcast; showery; overcast and boisterous.
Sat. . . 7	30.124	30.010	38	29	41	41	N.	.00	Snowing; overcast; clear and frosty.
Sun. . . 8	30.010	29.962	35	13	41	41	N.E.	.00	Overcast; densely overcast; snow at night.
Mon. . . 9	30.220	30.124	33	13	40	40	E.	.00	Overcast, sharp frost; overcast; clear and frosty.
Tues. . 10	30.223	29.947	42	27	40	40	W.	.00	Overcast; mild and overcast; clear, low fog at night.
Mean	30.099	29.928	39.43	22.86	41.14	41.14	..	0.24	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

JUDGING POULTRY—HEWITT TESTIMONIAL.

As I find a communication from "Y. B. A. Z." in which he animadverts on my previous letter, I venture to trouble you with a few remarks on some of his statements. First, as regards his mistaking Brown Reds for Black Reds, he attributes his error to a mistake in the catalogue; but one who assumes the *ex cathedra* tone of your correspondent ought to be sufficiently conversant with the difference between Black and Brown Reds to render him independent of an erroneous description in the printed lists. The catalogue did not, however, mislead him when he pronounced the hen to be very dark, whereas the reverse was the fact, and he is consequently discreetly silent on that matter. Taking these circumstances in connection with the fact, which he somewhat ostentatiously parades, that he did not devote more than three hours and a half to the examination of the birds, it is evident to me that his investigation was too hurriedly made to give his decisions the weight he claims for them. And considering the injustice such strictures, unless well grounded, are calculated to inflict on the judges, the dissatisfaction they excite in the minds of the exhibitors, and the consequent injury that results to the interests of such exhibitions, it is much to be regretted that any one should undertake to review the awards given by men whose qualifications and character are a sufficient guarantee for their fairness, without a competent knowledge of the subject, or giving himself a sufficient amount of time to avoid falling into the errors of your correspondent.

I quite agree with the remarks of Mr. Hewitt in his com-

munication, as to the judges having their full time secured them, and not being compelled to perform in one hour the work of three. I also agree with him that it might be attended with too great an expense to increase the number of the judges. But this is not the question; we have not to do with what ought to be, but with the actual facts of the case. The question is, What is to be done where, as is too frequently the case, the time for judging is infringed on through late arrivals? As an exhibitor, and taking an exhibitor's view of the matter, I still feel it to be a serious injustice, both to those who perform the office of judge and those who exhibit, that either through the fault of the former, or that of the committee, adequate time should not be allowed for fully weighing the respective claims of those who compete for the prizes; and I am still of opinion that it would be preferable to judge such portion as the time admitted of well, even though it should necessitate only a partial opening of the exhibition at the time announced, to allow the satisfactory judging of the remainder.

Before I conclude, I must beg permission to express my gratification at the satisfactory progress which has been made in Mr. Hewitt's testimonial fund. When, however, in Birmingham recently, I met with several exhibitors who had not yet subscribed, assigning as their reason that it wore the appearance of buying a prize. They intimated at the same time their intention of subscribing before the subscription list was closed, but should not do so in their own name. Now, any one who knows Mr. Hewitt must be fully satisfied that he would not be influenced by such consideration. It would be far better, and more honourable both to Mr. Hewitt and themselves, to subscribe in their own names, and thus openly show their appreciation of his services, as one who has, perhaps, done more to promote the interests of poultry exhibitions and improve the

quality of the birds that are shown than any other person.—EXHIBITOR.

TAIL-LESS COCHIN-CHINA PULLETS.

IN the criticism of the Bristol awards by "Y. B. A. Z.," which appeared in your issue of November 14th, mention was made of the disqualification of a pen of Buff Cochin pullets, on account of the absence of their principal tail-feathers; while in your own report of the Show in the next number you speak of "several instances in which the whole of the principal tail-feathers had been abstracted;" many of the trimmed (?) birds having been on this account passed over unnoticed.

Now, having for several years watched somewhat closely the development of broods of Buff Cochin chickens, I will venture to raise a doubt as to the possibility of proving that such tampering has taken place, and to express my opinion that it is just as likely that the birds may have been unfairly disqualified. At a certain stage in the development of pullets of this breed the majority of the birds put out a tail of undue prominence, often consisting of a number of black feathers spread out like a fan. These feathers generally drop out one by one when the bird is between six and seven months old, and it is not unfrequently the case that the principal feathers of the permanent and closer tail do not make their appearance, certainly do not project beyond the fluff, for weeks afterwards.

Supposing, then, that birds in this transitional state are exhibited, is their owner to be, therefore, accused of having tampered with them, and ought they on that account to be disqualified?

If very early-hatched birds are exhibited in November or December in this condition, they must, of course, have been unfairly trimmed, but May and early June birds, if exhibited at any of the shows which are now taking place, or are shortly to take place, must necessarily, in a large majority of instances, be exhibited either tail-less or with a few ragged and awkwardly-projecting tail-feathers, which are ready to drop out with a touch. Now, ought it in fairness to be called "trimming" to remove these, when in a few days at the farthest the bird would have herself cast them, and seeing that the feathers abstracted form no part of the permanent pullet-development, but are the last remaining relics of the chicken-stage of existence?

If the absence of the prominent feathers of the tail, in birds of this age, is to be considered as a disqualification, surely it would be far more satisfactory if judges would let it be well-known that they will in future award no prize to Cochin pullets which have not already assumed their permanent tails; and if the Secretaries of poultry shows would expunge from their list of rules that which informs the public that the age of the specimens will be taken into consideration in the award of the prizes. Exhibitors would then be saved the needless trouble, expense, and disappointment of sending for exhibition their later-hatched but often much more promising pullets.

If the shameful deceptions now, alas! so commonly practised are to be put down, it certainly is not by pouring the full vials of judicial indignation upon an abstraction of a few feathers which only by a few days anticipated Nature, or upon (what is just as likely to be mistaken for this), Nature's own work. There are modes of disgraceful imposition, to detect which requires the keenest and most watchful eye. No judge of poultry can keep too anxious a look-out in order to expose such dishonest practices; but, if the attention be diverted to cases where, there having been no concealment, there can have been no intention of deceiving, I firmly believe that by such over-refinement arbitrators will encourage what their object is to put down.

When I first read "Y. B. A. Z.'s" comment, I resolved on endeavouring to call attention to this subject. I have since been informed, on what I believe to be excellent authority, that the pen of Buff Cochin pullets alluded to in that straightforward and out-spoken critique, as having been disqualified at the Bristol Exhibition, had had the first prize awarded to them at Ipswich about a week before, and, what is more, by one of the same Judges who afterwards disqualified them, though they were exhibited at both Shows in precisely the same condition. I leave this to tell its own unsatisfactory tale; comment would be superfluous.—DELTA.

HANLEY POULTRY SHOW.—The prizes for poultry and Pigeons are liberal enough, but there is the very unsatisfactory including of totally dissimilar birds in some of the classes. For

example, "French fowls!" No judge can fairly award a prize where Hondans, Crève Cœurs, and La Ficche compete in the same class. "Dorkings, any variety, single cock." What chance has a White cock against a Coloured one, though equally good?

PRIZES FOR BANTAMS.

I AM glad to find that the ill-treatment of Black and White Bantams has been made the subject of a few remarks from a correspondent (see page 393). I admit that committees have a right to distribute the prizes as they think proper; yet I believe that, as a rule, they are actuated by a desire to draw up the schedules on the most popular basis.

In the Somerset Association's schedule, otherwise of the most liberal character, the Game Bantams are offered £10. Sebrights £4 10s.; whilst Pekins, the most unproductive of all unproductive poultry, are invited to a quiet walk-over in a contest with Black and White for another £4 10s.; and as though for the special benefit of Game and Pekin, all varieties are to compete in a general class for the same amount.

Next comes the Manchester schedule, once the fairest of the fair. Here £57 are offered to Game Bantams alone, while all other varieties are snubbed with the offer of £6 to be competed for in a general class, and with the same entry fees as the Game Bantams.

In the Kendal schedule Game Bantams must compete for £10 7s., with the all-but-certainty of winning the £5 5s. cup, and all other varieties are quietly shut out with £2 12s. 6d.

Now, I will admit that the entries of Game Bantams are generally large, but I hold, also, that if the other varieties combined were offered the same amount as given to the Game Bantams alone, their entries would much exceed those of the Game; and I think the modesty of this hint must strike even those most interested—the Game Bantam exhibitors themselves. If the committees were desirous to exclude from the shows some of the most useful and beautiful of pet poultry, the present mode would prove the most successful that can be adopted.—FAIRPLAY.

ALLOW me to thank your correspondent for his remarks on the Weston-super-Mare schedule of prizes. I have several pens of White Bantams which I should like to enter if I thought they would be likely to meet with the attention which I believe their merit deserves; but I was taught last year, and still more forcibly this, that a pen of White Bantams in an "any variety" class stands no chance whatever. As a last experiment I sent one pen to Bristol, where, as your correspondent justly observes, "of course" they were unnoticed.

Now I am, I trust, one of the last persons to feel annoyance at being honourably and fairly beaten, but I must say it is surprising, to say the least, that the "foreigners" should be so much better than Whites, or even Blacks; that the former should in almost all cases carry off the prizes, while the latter obtain no mark of commendation at all. Having been a breeder of both Whites and Blacks for many years, and seldom missing a good word, if not something better, when my favourites are in classes by themselves, I have often wondered what was the charm about the foreign varieties which gave them so enviable a preeminence in the eyes of the judges over their old-fashioned but elegant rivals. However, as I said before, I have been taught a lesson, and do not intend to enter White Bantams in an "any variety" class again for some time to come.

While I am writing, let me express my obligations to the Bristol Committee for their care of my birds at the late Show.—P. P.

SILVER-GREY DORKINGS.

YOUR answer to a correspondent in "Our Letter Box," November 21st, gives information quite at variance with my experience of Silver-Grey Dorking fowls.

You say, "We do not believe that in any yard all the birds bred are Silver-Greys." I have served above two seven years' apprenticeship to the trade, and ought to be somewhat of a journeyman by now. For several years I have not failed to produce every bird a Silver-Grey. This year I hatched off 267 chickens, and could not distinguish among them one bird varying from the other. Many years since some chickens came quite a canary colour, and when in plumage were not true to colour.

So fixed is the type of my birds, that I will undertake to provide eggs to produce two to three hundred chickens, and every one shall prove a true Silver-Grey.

The climate and soil where I live are hostile to rearing chickens; had I resided in a more favourable locality I should not fear competition in weight with the more bulky-looking Coloured Dorking, as the tight-feathered Silver-Grey both handles and weighs a larger bird than he looks in the show pens of Birmingham.—THOS. O'GRADY.

JUDGING GAME FOWLS BY COLOUR.

AFTER good shape and good feather, correct colour of feathers is of importance, and then the correct colours of the eyes, beaks, legs, and nails. The red eye denotes fierceness and high courage, and the black or dark full eye is the boldest eye of all. All other colours of eyes are inferior to these two; and the yellow or daw eye generally, though not always, denotes inferiority of courage. Other colours of eyes are produced by crossing, such as bay eyes, red-brown eyes, and orange eyes. The silver pearl-grey eye is not to be obtained by crossing, and is an exception.

Red eyes are the match for Reds, Greys, and Whites, and no others; black or dark eyes for those sorts that "cut out" very dark; yellow eyes for all with yellow or birchen feathering. Red eyes are proper for Black-breasted Reds, most Duckwing-Greys, Ginger Reds, Red Piles, Red Duns, and White Game fowls; black or dark eyes for Brown Reds, Dark Birchens, Dark Greys, and for the Black Game fowls (the large globular eye); yellow or daw eyes for Yellow Duckwings, Blue Duns, Gingers, Yellow Birchens, Ginger Duns, Birchen Duns, Yellow Piles, and yellow-feathered Black-breasted Reds with yellow legs and beaks; and light brown eyes and bay eyes for the mongrel breeds. The silver pearl-grey eyes are proper for the Silver Mealy Greys and Silver Mealy Duckwings with the white legs, but such birds as these are now very rarely to be met with.

As to the colours of the legs, the following are correct:—Willow legs for Black-breasted Reds and Duckwings, only for exhibition birds; but some Orange Piles, and Gingers and Ginger Reds, have the yellowish-willow legs, but are rare. Black legs or blackish-bronze legs are proper for Brown Reds, Dark Greys, Dark Birchens, and Black Game fowls, and to a few Mealy Greys, Duckwings, and Black-breasted Reds as well, when dark birds. White legs are proper to Whites, most Piles, some Red Duns, some Ginger Reds, some Black-breasted Reds, some Silver Duckwings, and to some Mealy Greys. The beaks and nails should correspond with the colour of the legs as nearly as possible. Yellow legs are correct for Yellow Piles, Yellow Duckwings, Ginger Duns, Blue Duns, some Black-breasted Reds, some Ginger Reds, and Gingers, and to the Yellow Birchens. (The upper mandible of the beak darker than the lower one). Blue legs are proper to some Red Duns and Blue Duns, some Black-breasted Reds, a few Red Piles, and some Grey Duckwings. Carp-brown legs to those Black-breasted Reds only, with the fawn-breasted Dark Brown hens. Beaks and nails of the same colour always.

The chief defects in the exhibition sorts are the following:—Brown-Reds should never be too light in colour, or have their eyes too light-coloured; nor light beaks, legs, or nails, or any light-coloured points, or white markings. Any black markings in the cock's breast are not correct, as the cock's breast should be clear reddish brown, or reddish brown streaked with darker brown, but not with any black. Hens being too light or too black is also wrong, they should be dark brown with streaked breasts, and the bodies pencilled.

In Black-breasted Reds too light or pale, or too dark or dull a red is wrong, or any red not bright, clear, vivid red is wrong, and any eye not red is also wrong; but any colour of leg is quite correct, as in fowls of this colour there are various colours of legs, and all, when there are good red eyes, are correct. Any white feathers are wrong. The nails should match the legs, as should the beak. Dark nails should accompany black, willow, blue, and carp-brown legs in all Game fowls; yellowish-white or yellowish-brown nails, yellow legs in all the sorts; and whitish nails, white legs in all the sorts also. Any spot on the cock's breast is wrong. In the hens pale breasts are wrong. Red Partridge hens only for prize birds, and willow legs always most popular for this sort. The brown and wheaten hens are never prize birds as a rule.

In Duckwings the cock bird being too red anywhere, or the

hen too brown is wrong. Hen's breasts of too deep a fawn-colour, or too red, are also not correct.

Silver-Grey Duckwings must exhibit no red or yellow, and Yellow Duckwing cocks neither red nor grey anywhere. The cocks must never be spot-breasted. The willow-legged dark red-eyed Grey Birchen breed are the prize cocks with the Silver-Grey hens, and these are the common standard birds.

In Red Piles, any colour not bright red with white is wrong. Any leg not white is inferior; yellow legs are the next best match; yellowish-willow legs the third. Red eyes are essential.

In Whites, yellow eyes are bad, any colour of leg except white is also undesirable, the red-eyed white-legged Whites being the true Whites. The yellow-legged Whites are too yellow in the feather to be good.

In Blacks, yellow eyes are bad, also any colour of leg but bluish-black. Brassy-winged cocks are the most popular. All points should be as black as possible. Red combs are more popular than the gipsy dark combs in Blacks.

In judging the two red sorts, the Brown Reds and the Black-breasted Reds, the Brown Reds should be the dark reds, and the Black-breasted Reds the bright red birds, as all the points in the Brown Red are darker, if a good dark bird, except the breast of the cock. For example, the hen is darker and hatches darker chickens. They "cut out" much darker than any other red breed. The comb, face, and gills are darker. Many, however, prefer orange-backed Brown Red cocks to any of the old true-bred Dark Brown Red cocks. In the Black-breasted Reds the colour is redder, being a true red. The hen is redder and lighter, and hatches lighter chickens. They "cut out" much lighter than the Brown Reds, and have the red combs, faces, and gills, and if red-eyed are of red blood, while the Brown Red is of the dark gipsy blood, and should always have the dark comb, face, and gills. All red-combed Brown Reds are mongrels. Many say they prefer dark Black-breasted Reds, but these are slower birds and less fiery and active than the bright red birds. Pale, dull, light-coloured Black-breasted Reds are too weak in general, the bright reds being the best birds. Brown Reds with orange-red backs and shoulders in the cocks are, perhaps, the quickest Brown Reds.—NEWMARKET.

BIRMINGHAM POULTRY SHOW.

It is hard to say when *Dorkings* will stop in size, but a contemporary who says in his report they are judged by weight is misinformed, and writes at random. There is a wide difference between judging by weight, and ascertaining that of selected birds of a breed in which size and consequent weight are essential elements. They are never, to the best of our belief, fattened for exhibition. Those who tried that plan some years ago, found to their cost that it led only to defeat. A competent judge will always detect it.

The Silver-Grey Dorkings cannot make satisfactory classes for cocks. It seems the fate of some breeds to reserve perfection for hens and pullets, while they deny it to cocks. It is so in this breed; while the former made classes of unusual merit, the latter were weak, and among the adults it was difficult to find worthy prize-takers. The White Dorkings, as exhibited at Bingley Hall, were hardly stationary. We think we have seen the classes stronger in every respect.

The adult *Cochins* were beautiful and shown in excellent condition. We were glad to find in nearly all the Buff pens the vulture hook was not to be seen. Why cannot the appendage be got rid of in the Whites? It causes many an otherwise good bird or pen to be excluded from the prize list. The *Grouse* and *Partridge Cochins* were exceedingly meritorious, and many of them of unusual size. As a proof how carefully they are now bred, we noticed but very few cocks with faulty-coloured breasts. It would be well to get rid of the yellow tinge visible in the plumage of some of the pullets. Throughout the *Cochin* classes the combs were good, straight, and well serrated, adding considerably to the labour of the Judges.

The *Spanish* were beautiful, the faces, as a whole, showing less of the cauliflower-surface than usual. We never recollect seeing this breed shown in such general good condition as this year.

In the Golden-spangled *Hamburgh* cocks there were more dark breasts than we have seen of late years. Is the old question about to be revived? We thought it was at rest.

The young *Brahmas* will not surpass the old ones, and, as a whole, were not in our opinion equal to classes we have sometimes seen.

The French breeds having had classes to themselves, ask for especial notice. *Grise Cœurs* were perfect; the cocks superior to anything we have seen. In this breed there is difficulty in choosing them free from any coloured feathers; but it was here the rule, almost without exception. We can speak equally well of the *Houdans*, good, square-built, Dorking-looking birds, short on the legs, and with warranted constitution; but the *La Fleche* were very weak in numbers and quality. We know not from what cause, but they cannot hold their own in England. Their friends are giving them up.

Silver *Polands* increase, but the Golden are at a stand-still. We

believe there is great difficulty in obtaining fresh blood for the latter, and hence their decadence from the birds shown years ago by Mrs. Pettit, Messrs. Coleridge, Bush, and Greenall.

The Game *Bantams* would seem to increase at the expense of the *Sobrights* and *Whites*. Both these latter decrease. The Blacks hold their own, and show not only in numbers but exhibit the points that were insisted upon many years since. They are attractive birds, with their red combs, white dent-combs, and black plumage.

Rouen *Ducks* everywhere are taking precedence of the *Aylesbury*. They began by being more numerous, and now they are heavier. They teach a great lesson to breeders and exhibitors. There are now no faulty bills nor defective plumage. The *Buenos Ayrean*, again, are now small as when first imported, and beautiful in the metallic lustre of their plumage. *Carolina* and *Mandarin Ducks*, the marvels of beauty and rarity a few years since, now make a numerous and attractive class, and are shown with no more precaution than the commonest *Ducks*.

To the old frequenters of the great annual poultry gathering, it is gratifying to see the originators of it still at their posts, reaping their well-earned reward in its continued success and popularity. We have again to congratulate them, and to thank Messrs. Shackel, Luckcock, Matthews, Wright, Lowe, Mapplebeck, Addins, Wiggins, Sabin, and many others for the unselfish exertions that insure so much pleasure to their visitors, and so much good to the town.

GUILDFORD POULTRY SHOW.

This was held on the 10th instant. Exhibitors must be resident in Surrey. We will give a report next week.

DORKINGS (Any Variety).—First and Second, J. Clift. Third, Mrs. Norris. **SPANISH**.—First and Second, J. C. Ramsden; E. T. Bennett; J. Ivory; R. Pople. **SPANISH**.—First and Second, James, Peckham Rye. **COCHIN-CHINA**.—First, W. Weston. Second, Miss Cox. **BRATAIN POULTRY**.—First and Second, J. Pares. Highly Commended, J. Pares; James. Commended, Mrs. Norris, Cobham. **GAME**.—First and Second, J. Pares. Highly Commended, E. Burge. **HAMBURGH**.—First and Second, H. Cox. Highly Commended, R. Mangles.

BANTAMS.—First, James. Second, Miss Scott, Sandhurst Grange. Highly Commended, J. Pares. Commended, T. Lee. **ANY OTHER VARIETY NOT MENTIONED**.—First, Miss Scott. Second, J. Pares. Commended, M. King.

DUCKS (Aylesbury).—First, Rev. Dr. Merriman. Second, E. T. Bennett. Highly Commended, E. Hilder. Commended, Rev. Dr. Merriman.

DUCKS (Any other Variety).—First and Second, E. Burge. Highly Commended, E. Burge. Commended, Mrs. Norris; H. Cox.

GESE.—First, Lady M. McDonald. Second, W. Messenger, Womersley. Highly Commended, Mrs. Norris; H. Cox; Lady M. McDonald. Commended, T. P. Copestan.

TURKEYS.—First, Earl Lovelace. Second, Lady M. McDonald. Highly Commended, W. Messenger; J. C. Ramsden; T. P. Copman; Rev. Dr. Merriman; Lady, M. McDonald.

EXTRA PRIZES for the best *Pouls* in any of the Classes were given by J. Pares, Esq., and Mrs. Ramsden; but we are not informed to whom they were awarded.

PRESERVING EGGS.

In a wooden box or tin of the size required (a flower-pot will answer the purpose very well, having stopped the hole in the bottom), put a layer of bran, locally known as *toppins* or sharps. When made level, it is ready for the eggs, which are treated in the following manner:—Having collected the eggs as soon after they are laid as possible, get a small lump of butter—a bit the size of a pea is sufficient—and rub in the palms of the hands till melted. Now take an egg and rub it over with this butter varnish till every part is just covered; then place it on the small end in the prepared vessel, and, when the first layer is completed, fill up the spaces between, and an inch thick on the top, with the *toppins*. Then proceed with the next layer, and so on till the vessel is nearly full. Lastly, cover all over with about two inches of *toppins*, tie down with paper, and keep in a cool dry place. Treated thus, the eggs will keep good for a year and a half.

If the eggs can be had warm from the nest they can be "varnished" much quicker and better.—T. MARTYN.

[With this we received six eggs, which Mr. Martyn informed us were laid in June and July, 1896, and, consequently, were more than eighteen months old. They were useable for kitchen purposes, but rather strongly flavoured.]

A CLERICAL BEE-KEEPER'S SUNDAY ADVENTURE.

A CORRESPONDENT of *The Field* relates the following anecdote of a west country clergyman:—It happened one Sunday afternoon in the month of May, about ten minutes before divine service, that our friend was walking from the school to the church—like Sidney Smith's missionary, "gown, and bands, and hymn-book too"—with slow and sedate step, as befitting the occasion, when his ear was assailed by

snodry cries of "There they be! there they be! keep your eye on 'em." Looking sternly round to ascertain the cause of this unseemly clamour, he saw his own man, accompanied by two or three others, running frantically along with their heads in the air. Presently he found himself appealed to: "Do'ee run, zur, do'ee run, or we shall lose 'em." He looked up, and immediately saw the cause of such unwonted excitement: a swarm of bees—his bees—fast disappearing in the clear ether. To hesitate was to be lost, or rather to lose the bees. He was over the wall in a moment. A few minutes more saw him across the corner of the grass field, over another wall, and panting down the village street, with his head in the air like his more humble followers. Sympathising neighbours soon swelled the train, with the musical accompaniments, usual on such occasions, of tongs and frying-pans. A friendly hand placed something in his grasp; a friendly voice in the shrillest tones of feminine excitement shrieked in his ear "Do'ee take this, zur, and do'ee rattle on." Mechanically he took the gift, and "rattled" it with the energy of despair. A moment more, and he was conscious of his position. It wanted but five minutes to the hour of service, and there he was, a quarter of a mile from church, surrounded by his faithful parishioners, and firmly grasping with both hands a tin slop-pail with a stone in it! The congregation on that Sunday afternoon, I regret to say, was scanty; but, still faithful to their pastor, the truants were found by that worthy divine, on his return from church, congregated in the stable yard. They did not say much—it is not their way; but a grin of conscious merit pervaded the whole assembly. Every countenance bore the expression of one who has not only tried hard to do a good action, but has done it; there was no doubt about it. Virtue had been crowned with success, and the bees had been hived!

THE HONEY HARVEST IN THE MIDLAND COUNTIES.

I THINK it is pretty well known that 1867 has been the worst that has been known for many years, at least as far as my experience goes. I began the season with ten stocks as good as any one could wish for, five in collateral boxes, three in the old straw hives, and two in square wood boxes. Believing these to be the best both in bees and store, and thinking it might be a favourable season, I placed a large bell-glass, 12 inches by 16, which I had by me on one of them, and it so happened that I placed it on the right one; for on the 11th of May, about six o'clock in the morning, observing an unusual quantity of bees on the footboard of the other one, I gently removed them with my hand, when to my astonishment I found a dead queen, and from that time they began to show symptoms of sluggishness. Finding they grew worse, at the end of three weeks I took them up and was surprised to discover that in so short a time the bees had dwindled down to about a breakfast-cup full, although I took from them 24½ lbs. of honey, I also put two table glasses on two collateral boxes, and shut them off from the side boxes, leaving the others to work in the side boxes, but I found that neither of them required additional room, for they did not fill up their old cells, but I believe all the old stocks have plenty of food to stand the winter.

I had two swarms, but not until the 19th and 21st of June; these were very strong in bees, but they obtained scarcely anything, one weighing but 12½ lbs., and the other 15 lbs. including the hives. I weighed them in the first week in September, and then I commenced feeding them and shall continue to do so while the weather remains mild, although, I think by lifting them they have enough stored to stand the winter. They consume 6 lbs. of sugar and 2 lbs. of honey simmered with one quart of water weekly.

The two new stocks commenced a fresh harvest in October, on the 7th, 10th, and 15th I noticed them heavily laden with pollen of a bright yellow; they commenced about 8 A.M., but from 11 A.M. to 1 P.M. I never saw bees work more vigorously even in May or June. What surprised me was that neither of the old stocks brought home the least sign of pollen. I watched them closely and think they obtained a large proportion of it from the Michaelmas daisies, for they were the only flowers out anywhere near.

I have taken this year three glasses, one table-glass weighing 19½ lbs., one ditto 15 lbs. 1 oz., and the large bell-glass before mentioned weighing 41 lbs. 2 ozs. I cannot account for this stock collecting so much more honey than any of the rest, unless the bees had a larger store left from the winter. Had they finished the glass I have no doubt it would have weighed 60 lbs., many of the cells being unsealed, and some few in the other two were unsealed, the honey being of a very dark colour. I exhibited the three glasses, and also a set of collateral bee boxes in polished mahogany, and they were allowed by several large bee-keepers to be the best ever brought. I have not

offered them for sale at present, as I am making some bar-frame hives and thought of advertising them in your Journal next spring.—A MIDLAND COUNTIES BEE-KEEPER.

SILKWORM REARING IN ENGLAND.—No. 2.

THE silkworm is produced from a small egg, about the size of a small pin's head. On issuing therefrom it is a small, blackish-looking, and very active kind of caterpillar, the size of a small ant. The blackish appearance at hatching is caused by the caterpillar being covered with innumerable hairs, and not by the natural colour of its skin, which is really whitish. This black gradually disappears as the worm grows larger, and is replaced by a very delicate creamy hue, sometimes presenting a shining appearance, or glassy transparency. Some breeds of the silkworm are ornamented with stripes round the body, termed "tiger-striped," and are very handsome; others there are naturally dark. I am inclined to believe these different appearances are derived from mere sports in the breed, as is the case in vegetables from intermixture. I have seen the large Macedonian silkworm $\frac{1}{4}$ inches long, and weighing within a fraction of an ounce. Some of the smaller breeds do not even attain 2 inches in length, but their silk is finer.

The silkworm may be said to have four states—viz., the first is the egg state, the second is the caterpillar, the third the cocoon containing the chrysalis, and the fourth is the perfect insect or moth, which latter deposits the eggs for future generations. It will be understood that the cocoon, or cone, is the ball of silk produced by the worm in which to enclose itself. The cocoon may vary in size from that of a sparrow's egg to that of a pigeon's, according to the breed.

The larger breeds are several days longer in arriving at maturity than the smaller kinds; but my remarks are applicable to them all, with the exception of one small breed, which has only three changes of skin instead of four. These changes of the skin are preceded by sleep or a torpid state, lasting about two days, during which time the insect does not eat. During this sleep the insect undergoes preparation for shedding its skin, which it does from off its entire body from the tail end, with the exception of the covering or kind of case of the head, which gradually falls off in front. This shedding of the skin must be looked upon as a wise provision of Nature to add to the comfort and cleanliness of the insect, and, doubtless, tends to keep the breathing holes open, for there are no less than eighteen of them, arranged along the two sides of the body. Be it observed, the silkworm does not inhale the air through nostrils like animals. This number of breathing holes should impress upon us how important it must be to keep the insect abundantly supplied with air, and pure air too.

Each time the silkworm casts off its old skin the new one below it appears too large for it, as though supplied with fresh room for the insect to grow in. The skin is evidently of an elastic nature, for as the worm grows it stretches, until, on the worm arriving at its full size, it is again discharged to make room for the new skin forming below it. It is also very contractile, for on being cut it immediately shrinks. The worm undergoes four changes of skin between the time of its being hatched and commencing to spin its cocoon of silk; but it again sheds its skin inside its silken house. Having voided all the silk from its body, and contracted itself into the form of a chrysalis, its last skin may be seen on opening a finished cocoon.

After the worm begins to spin it never eats again, and while the chrysalis state lasts, about fifteen days, it is like a torpid grub, almost without appearance of life. If a chrysalis be touched by the finger it will show signs of life by moving at the tail end, or giving quick beating movements or kinds of darts. From the chrysalis inside the cocoon issues the moth, or perfect insect, bursting away its chrysalis form and shell; it wets the cocoon at one end, and gradually pushes its way out, leaving a hole, which spoils the silk for reeling.

The moth having left the cocoon lays its eggs, and in a few days dies. There are male and female moths. The males are most active, and beat their wings when in search of the females.

It is stated by many writers that the silkworm was originally brought from Asia, and from most accounts it seems to have been reared in China in very remote times, and also in India, and to have been first introduced at Constantinople about A.D. 552 by two monks, who managed to bring some eggs concealed in a cane walking-stick. These eggs were presented by them to the then Emperor Justinian. The monks, it appears, went to China as missionaries, and managed

to elude the rigour of the laws there, that prohibited exporting the eggs, it is said, under pain of death. Afterwards the silkworm found its way into Greece, Italy, and France. The present century has opened up commerce with the East, and the introduction of different breeds of the silkworm is going on without interruption. France and Italy are importing largely from Japan and other parts.—LEONARD HARMAN, JUN.

OUR LETTER BOX.

MALT DUST AS POULTRY FOOD (A. B. C.).—Malt dust is good poultry feed; but it has a great drawback in the fact it makes the eggs taste. We speak from experience. It is good food in this hard weather, and fowls like it much.

BRABMA COCK (Dark Brahma).—You need not be uneasy. It is very common at this time of year, and will likely remain the same for some time. There is no age for the pullets, and that is not the cause. You will see a change after Christmas, if not before, or a change of weather would probably bring it about. It is bad mating to breed from brother and sister. Tea leaves are quite safe; but they are bad food for fowls. They fill crops without feeding.

POULTRY CONFINED (E. C., Yarmouth).—You may keep a cock and six hens in each partition (18 feet long and 7 feet wide). Cinder siftings are not the best bottom you can have; road grit or scrapings will be much better. Garden mould is a capital deodoriser; but it need not be sifted very fine, nor need it be spread evenly; put it in a heap and let the birds scratch it about. To keep them in health you must supply them with sods of growing grass and with lettuces. If you have none of the latter you may give a cabbage; give it whole, and let them pick it to pieces. It is well to rake the surface over frequently. Keep the rakings in a heap, they are most excellent manure. Houdans are very good and hardy fowls; they are excellent layers, but they do not sit. The other breeds that would do well in such a space are Brahmas and Cochins. We cannot account for the cocks dying, nor can we understand what you do with two in your confined space. If these die let the hens run by themselves for a time.

CRÈVE CŒURS (Young Exhibitor).—We do not think a shade of difference in the colour of the legs would be essential; but you must recollect in both cases they must be blue. White legs are inadmissible.

FOOD FOR BRAHMA POOTRAS (Gallus).—A change of food is always desirable. At this time of year they should have three meals every day, because the earth yields them little or nothing. We always give meal in the morning, whole corn at midday, and meal again just before dark. This treatment is for fowls that depend only on the food given to them. If they have anything like a farm-yard to run in, or access to a stable-yard and its dunghill, two meals per diem are enough.

FOWLS ROUPY, OR CATARRHED (W. Birkett).—Your fowls, snorting and snoring, have incipient roup, or they are suffering from ebull. Wash the swollen eye with cold water and vinegar. Give them plenty of bread and ale to eat. If this do not cure them, give them every night two pills of camphor the size of a garden pea. Try Baily's pills.

WEAK-LEGGED BRAHMA (J. D., A Constant Subscriber).—As all your other fowls are healthy, it is probable the Brahma cock is suffering from weakness, the result of quick growth. If this be not the case he is cramped from being always on bricks. It is hardly possible for fowls to do well if they are kept on bricks. They are damp, hard for the fowls' feet, and they afford no scratch.

GAME BANTAMS (R. B.).—We know of no cure for the Bantam pullet. It is a great disadvantage for a Game Bantam cock to droop his wings. They should "clip" tightly to his body, and be carried "quite up." The colour of the eggs is not material. Willow legs are preferred, but a yellow tinge is not any disadvantage. The markings of Black Red Game Bantam cocks and hens should be the same as in Game fowls. The cocks should have red hackle and saddle, black breast, thighs, and tail, no white or partially white feather. The pullets should have brown bodies and tails, partially yellow hackle, and lighter, almost wheaten breasts.

BRINDLEY'S INCUBATOR (Incubator).—If you write to Mr. Brindley, St. Almund's, Derby, he will give you the information you seek for.

REMOVING BEES (Northampton).—We would not attempt the removal until the winter was over and the bees in full work, say April or May if the season be late, and then shift them little by little very gradually, until we had every hive in front of the bee-house, close to and directly in a line with the spot which each is intended to occupy. When the bees are fully accustomed to their new position the hives may be placed inside the bee-house.

GOLDING'S GRECIAN HIVE (Carolus).—Its principle is good, inasmuch as the combs are moveable. The size (11½ inches diameter at top, tapering down to 10½ inches, by 9 inches deep), is, however, much too small, whilst the bars are too wide apart; 16 or 16½ inches diameter, by 9 or 9½ inches deep, would be a much better size, and would accommodate eleven combs. Moveable comb hives of a circular form must, however, always possess this radical defect—that the bars being of different lengths are interchangeable only within certain very circumscribed limits, thus forfeiting nearly all the advantages of the system. It is by no means unusual for the bees of healthy stocks to disport themselves outside their hives on mild days during winter, and there can be little doubt that their doing so is beneficial to them. Bees are unable to avail themselves of an artificial supply of food during cold weather, so that it may be deemed nearly impossible, as it is certainly most inadvisable, to feed them during winter.

POULTRY MARKET.—DECEMBER 11.

There is a slight improvement, owing to the cold weather and the approach of Christmas, which somewhat diminishes the supply.

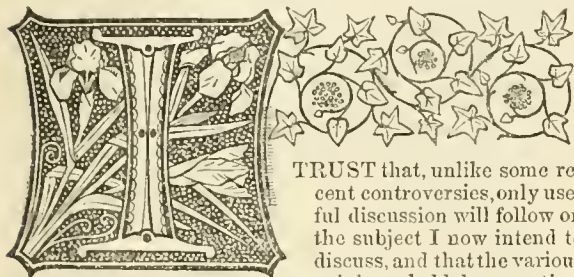
	s. d.	s. d.		s. d.	s. d.
Large Fowls.....	3 0	3 6	Pheasants	2 6	3 0
Smaller do.	2 6	3 0	Partridges	2 0	2 3
Chickens	1 9	2 0	Grouse	6 0	2 6
Geese	6 0	7 0	Hares	2 6	3 0
Ducks	2 0	2 6	Rabbits	1 4	1 5
Pigeons	0 9	0 10	Wild do.	0 9	0 10

WEEKLY CALENDAR.

Day of Month	Day of Week	DECEMBER 19—25, 1897.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
19	Tu	Meeting of Linnean Society, 8 P.M.	41.9	53.1	39.0	16	5	18	50	13	50	10	49	10	23	3 49	253
20	F	Sun's declination 23° 26' S.	44.3	53.8	39.1	15	5	8	50	3	59	1	14	1	24	2 19	254
21	S	Shortest Day.	43.6	53.9	38.7	15	6	8	51	3	7	3	40	1	25	2 49	255
22	SUN	4 SUNDAY IN ADVENT.	44.5	52.6	38.5	19	7	8	51	3	12	4	9	2	26	1 19	256
23	M		44.0	52.0	38.0	20	7	8	52	3	15	5	42	2	27	1 49	257
24	Tu		43.6	51.5	37.5	16	7	8	52	3	15	6	19	3	28	before	258
25	W	CHRISTMAS DAY.	43.4	52.1	35.2	9	8	8	53	3	12	7	1	4	29	0 11	259

From observations taken near London during the last forty years, the average day temperature of the week is 44.0°; and its night temperature 32.3°. The greatest heat was 58°, on the 25th, 1827; and the lowest cold 4°, on the 24th, 1860. The greatest fall of rain was 1.13 inch.

GLASS FOR HORTICULTURAL PURPOSES.



TRUST that, unlike some recent controversies, only useful discussion will follow on the subject I now intend to discuss, and that the various opinions held by practical

men will, when duly ventilated, tend to solve what, to the gardening public, is yet a problem—namely, Which is the best and cheapest description of glass?

The requirements of individuals may in some cases necessitate an alteration in the proposition stated, but for the general reader, and I may say the general builder of glass houses, the question of what is the best and cheapest glass is comprehensive enough to allow of much being said, and, taking it literally, must include the greater portion of the glass used in glass structures of all kinds. By way of emboldening others to give their views on the matter, a few remarks on some of the kinds of glass used in bygone times, as well as at the present day, will not, perhaps, be without their utility; at the same time I hope that some one will supply the omissions and rectify any errors I may make, as well as state his own ideas on the subject, if he thinks mine not in accordance with his experience.

Commencing, then, with glass in the condition it was generally met with when used in glazing structures adapted to horticultural purposes some forty years ago, I am led to the conclusion that in regard to variety, there were nearly as many kinds used then as now, although it is probably no exaggeration to affirm that its consumption has been multiplied at least tenfold. At that period, however, the Excise restrictions prevented the full development of the glass trade, and encouraged a description of glass being manufactured at once too thin and too expensive for ordinary hothouse building; while, to counteract its disadvantages, a very inferior glass was often adopted for common purposes, and this, not being of sufficient clearness to come within the scope of the Government duty, was to be had very much cheaper, being, in fact, duty free. This kind of glass varied considerably in degree of lightness or transparency, but was usually dull and more or less green. Though many of the windows of cottages, and offices of various kinds, were glazed with this glass, I cannot remember its being much used for glass-house building, but I have seen frames glazed with it, and can bear testimony to the dark appearance they presented, and the liability of such glass to become dirty. My experience of it, however, was not a long one. Crown glass, superior to the preceding kind, held the preference for a long time, and even at the present day has its admirers. It is yet far from being driven out of the trade, although the quantity made is yearly becoming less, and its use in

horticultural buildings is mostly confined to the repairs wanted in places where it has been used before, and where another kind of glass cannot well be substituted for it. Some old people, however, regret its going out of fashion, alleging that its defects were not half so numerous as those of its successor the all-important sheet glass.

Many years ago I was shown in a remote part of the country a vinery which was said to have been built about the beginning of the last century, and, strange to say, it did not differ very much in appearance from those in use at the present day, excepting that its timbers were more sturdy, and, being oak, had apparently not been painted for many years. The house had been converted into a sort of greenhouse when I saw it, but the glazing showed some of the changes that had come over the glass trade since the structure had been erected, as I saw a few panes of a good sturdy description of glass said to have been in use before the Excise regulations came into force. This glass, as far as my memory goes, did not differ much from some of the kinds of rough plate now in use, but I took but little notice of it at the time; the other kinds of glass employed were the ordinary crown glass, almost universal at the time, with some under-duty glass, and, what was more conspicuous than all, a considerable number of bullions. The last, I may say, were by no means uncommon at that time, as I have seen the lights of a frame glazed entirely with them; but they were more frequently met with in the windows of offices, as their weight was much against their being used in moveable lights, to say nothing of the other evils attending them.

Prior to that great boon to the gardening world upwards of twenty years ago, the removal of the duty on glass, much attention was directed towards finding out a suitable substitute for it, and I believe more than one patent was taken out for a dressing for canvas or calico, so as to render these fabrics transparent and waterproof, but soon fell to the ground. The abolition of the duty on glass caused such an extraordinary demand for the article that the benefits of the measure were but partially realised at first; but by degrees the price came down as considerably as glass advanced in utility, and sheet glass has now become the order of the day. The demand being greater than the home manufacturers could supply, recourse was had to the foreign makers, whose glass was admitted into the market also, but much of this being of an inferior kind, an outcry was raised against sheet glass, and another kind—prepared rough plate, was put forth to supersede it. The merits of this rough plate glass were, however, overrated, and as by degrees a better description of sheet glass was created, the reign of rough plate was short; not but that many esteem it at the present day, but its expense, the difficulty which glaziers have in cutting it, with some other disqualifications, seem to have restricted its adoption.

Since sheet glass came extensively into use in garden structures it has undergone considerable alteration, or rather its quality has been raised. In the earlier period of its use a weight of 13 ozs. to the square foot was thought sufficient, but was speedily raised to 16 ozs. and this thickness is often used yet, although it is generally

admitted to be too thin, and 21-oz. glass is oftener called for. I believe that the Crystal Palace was originally glazed with 16 or 18-oz. glass; but substantial structures are often glazed with 21-oz. glass rather than with that which is of less weight, or thinner, and many who do not object to a little greater first outlay find that even the 26-oz. glass is cheaper in the end than the thinner kinds. At Linton all new structures put up during the last twelve years have been glazed with glass of this quality. Although the area of each square is seldom more than $1\frac{1}{2}$ foot, yet when breakage is taken into consideration I am of opinion that a less thickness is not economical, and when the area of the square exceeds 3 feet, I would have the glass still thicker.

Glass should also possess other qualities besides mere thicknesses, for such is no compensation for a wavy uneven surface, or the other defects so often met with in the inferior descriptions of sheet glass. For many years it was customary to blame our Belgian neighbours for all the inferior glass, and certainly I have seen some very poor samples from that country, but I suspect some is also made at home; at all events those about erecting new glass structures would do well to look into the matter of glass, for although their contract may prevent their rejecting entirely a kind not to be recommended, a little care may be exercised in looking over the squares and selecting only such as are clear and free from faults for the sunny side of the building. The defective glass may be used on the north side, in the partitions, or where the sun's rays do not pass through it, so as to injure the plants beneath. Belgian glass is also said to be more brittle than that of home-make, breaking with a less blow, and being in many other respects inferior, though I am not sure but on the whole it is clearer; still this, I expect, depends on the selection.

Some years ago much was said about rough plate of a certain make being well adapted for horticultural purposes, but it was never a favourite with me. Its use, I think, is chiefly confined to those who, having had a bad sample of sheet glass, were glad of any change that promised improvement. Some, also, admired it for its supposed beneficial power of diffusing the sun's rays instead of transmitting them in straight lines, thus preventing burning or scorching; but the benefits seem to be more ideal than real, and not sufficient to compensate for the increased cost and the inferiority of appearance. When, however, the construction of the house is such as to require sheets of 3 or 4 feet superficial, or more, a stout kind of glass like rough plate is certainly advisable, but a thicker kind of sheet glass would probably do as well; still this is one of the cases in which practical men differ very much among themselves, and I by no means assert that my views are the most correct, as I have had so little practical experience with rough plate as not to be able to give a decided opinion. Some, however, who have adopted this description of glass have acknowledged themselves disappointed, and found out to their cost that breakages do occur with it as well as with other kinds, and more especially when the squares are large.

Coupled with the description of glass might be mentioned the most suitable size of square for glazing with; and here I will add, that although I am an advocate for thick glass, I do not recommend large squares, especially for moveable lights, as the breakage is so great, and the advantages of large squares seem not sufficient to counterbalance this evil. I am likewise not an advocate for what is called a very cheap house, as the term becomes a very questionable one by the time the house is a dozen years old. As an example, I will mention a case which came under my notice a short time ago. A range of vineries and other forcing-houses was put up by an eminent London firm eighteen or twenty years ago. The rafters were of timber, while the frame and glazing-bars were of zinc plate, doubled into the requisite shape to form the proper glazing-rebate. The sides were of hollow zinc as well as the top ends where the glazing-bars were soldered to. The whole being very light and glazed with squares of, I think, upwards of 2 superficial feet, looked very well. Of the cost I am not certain, but I believe the adoption of the plan was not influenced by motives of economy. After some time it was found that the cords attached to the top sliding-lights occasionally pulled the top off entirely, the soldering giving way, and repairs almost equivalent to the making of a fresh top were the consequence. Added to this, the breakage of glass was very great from the many other causes which every one who has glass houses knows will be the case more or less; but, of course, every one except, perhaps, the glazier likes it to be as little as possible. The houses referred to were not those in which

the least possible amount of everything excepting glass is used in the construction, but the workmanship and fittings were in every respect good, only the result proved that whatever advantages zinc might have in the fixed roof, it was not adapted for the moveable portions. I have seen some other modification of this plan, but excepting in the cases of curved roofs their utility seemed questionable. The same may be said of iron generally, although in very large structures it is almost impossible to dispense with it, yet when the glazing can be done in timber it is much better. Let iron columns, girders, braces, &c., do their part as well; good deal sashes will be none the worse of their help.

In speaking of and calling attention to glass adapted to horticultural purposes, it was not my intention to introduce the building of glass structures further than to give examples of the utility of each kind of glass; nevertheless, I would advise those intending building not to be too confident that a house costing little at first is a cheap one. Time alone will prove whether it is so or not, and many who thought at first that they had made a good bargain, discover at the end of two years or less that a great outlay is required for fresh glass and painting, and these items are often repeated before a dozen years have elapsed, and then it is found the house is hardly a house at all. Extravagance is, of course, quite as bad the other way. Perhaps the best way to judge for oneself in the choice of a glass house is to inquire for and examine one of those cheap structures that have stood a dozen years or more, and to be guided accordingly. Let it be fully understood, that in recommending a more substantial building to the amateur who only, perhaps, wants one or two glass houses altogether, I do not doubt but a cheap, slightly put-up house may be more prudent for those who require a score of such. In the latter case there is usually sufficient employment for a painter and glazier being kept at all times ready to repair at once any damage; but this is not the case with the owner of a small extent of glass.

In conclusion, I should like the opinions of those having experience in the various kinds of glass used for horticultural purposes, and also whether any new modes of glazing are likely to supersede that generally adopted. Several plans have been tried, but hitherto without affecting the consumption of plain putty. Whether putty is destined to continue at the head of adhesive materials or not is more than I can venture to predict; but hitherto it has withstood all attempts to supersede it. If a substitute possessing all its advantages without its defects could be found, it would be a great boon to the horticultural builder. Paint I must leave to those better acquainted with it, and who are, perhaps, greater admirers of its effects than I am. —J. ROBSON.

CULTURE OF MIGNONETTE IN POTS AND AS TREES.

I SHALL confine my remarks to the culture of Mignonette in pots to bloom through the winter and spring.

For this purpose a sowing should be made during the first week in August to bloom in November and December, another in September to bloom in January and February, and another a month later to bloom early in spring. The pots of most convenient size are those 5 inches in diameter, called by some 48's. Drain them well, and place a thin layer of rough turf, with the soil beaten out of it, over the drainage. I have found this more effectual than moss for keeping the drainage open, as it lasts longer, which is very important in the culture of Mignonette.

The soil I use consists of three parts good turfy loam, well seasoned and not too light, and one part good leaf mould and well-rotted dung, with a liberal addition of silver or river sand, charcoal, and lime rubbish. Thoroughly mix them with the hand, and fill the pots to within half an inch of the rim.

Sow the seed thinly and evenly over the surface, cover with a quarter of an inch of soil, and place the pots in a cold frame upon coal ashes, and within 6 inches of the glass. If the soil is moist do not water for the first few days; after that a good watering must be given, and no more until the seedlings are up. Give little air during that time, and shade from the bright sun at first.

After the seedlings are up air may be given more freely, and the pots plunged in the coal ashes with some rough material underneath, to take the water away from the pots freely. When the plants become stronger the lights may be taken off every fine morning. Stop the plants when about 3 inches high

to make them bushy. Water very sparingly at all times, and do it in the morning during the winter months: nothing injures this plant so much as over-watering. When the plants show bloom remove them to the greenhouse or conservatory. To keep them tidy place four or five neat stakes round the inside edge of the pots, and pass some finely divided Cuba bast around them.

By carefully attending to the above hints and practising them, as good Mignonette may be grown in the country as any that is sent to Covent Garden Market.

The above remarks apply also to the cultivation of tree Mignonette, with the following exceptions. Sow a pinch of seed in the centre of as many 3-inch pots as there are plants required. When the young plants are strong enough thin them by degrees to one plant in a pot, and that must be the strongest. Train that up a stake to the height required, pinch out all side shoots and the heads of bloom, but do not divest the stem of its leaves until the plant has attained its full height. To form a head leave about three shoots at the top, and pinch them in from time to time.

I have had tree Mignonette 4 and 5 feet high with heads 2 feet through, by sowing the seed as above described in August and growing the plants for twelve months, shifting into larger pots when required. These were handsome objects in the conservatory, and afforded many cut flowers all winter. For ordinary-sized trees the seed should be sown during the first week in May to bloom throughout the following winter. Different catalogues announce a giant variety for this purpose, but in growing the two I have found no difference.—THOMAS RECORD, *Hawkhurst*.

DESTROYING PREDATORY INSECTS.

HAVING read with interest the articles which have of late appeared on the destruction of those pests to the gardener—mealy bug, scale, thrips, &c., I determined to try Fowler's insecticide fairly, and the following is the result:—I made a solution, 4 ozs. to the gallon, as recommended in the printed directions; but first, although it is stated not to injure any plant, I wished "to make assurance doubly sure," and dipped a young growing plant of *Adiantum*, likewise watering well with the insecticide. The result proved that at all events using it so freely to the roots is not beneficial, as some of the youngest fronds turned slightly black, but when the top only was dipped no harm followed.

My first trial of the insect-destroying powers of the application was by dipping some stove plants, such as *Ardiesias* and *Gardenias*, to destroy scale, and the insect was killed at once without harm to the plants. I next tried it upon several plants as a remedy for mealy bug, for I am sorry to say that I cannot, like Mr. Pearson, boast that my plants are free from it, having lately come into the charge of houses which have been for a time neglected; but thanks to insecticide, every plant, whether dipped or carefully sponged, is now, several days after the trial, quite clear of bug, scale, and thrips, without harm to a single leaf. Amongst the Ferns dipped were some valuable *Gleichenias*, rare *Aspleniums*, *Pteris*, &c. I should like to know why it is advised to use the composition at 85°, as it is very difficult to keep it near one heat, and I tried it, and found it to answer when cold. Should this meet the eye of the Messrs. Fowler, they would perhaps explain.

As to the "horrible and disagreeable paints of clay, sulphur, manure, and other ingredients," spoken of by "T. R.," for Vines, Peach trees, &c., under glass, I have long discontinued the use of them. Even when a boy, I could never understand why my master, a clever gardener, was so very particular about my washing the stems as well as the leaves of his *Camelias* "quite clean," and yet order me to plaster plenty of a vile mixture he prepared with cowdung, clay, &c., upon the Vines, which mixture for the most part remained until the Vines were dressed and pruned in the following year. I could, I say, never understand why I should clean the one, and daub the other, nor, indeed, can I yet see the philosophy of it, and I have no doubt ere long it will be one of the things of the past, for it must be evident to all that to clog up the vessels in the cuticle of the stem, will prevent their performing their proper functions, and must, therefore, be detrimental to healthy action. I have for many years used Gishurst, and am quite satisfied with the results, as being superior to the plastering system so often seen.

As to home-made preparations, one which I have used with marked success for several years for scale, mealy bug, thrips,

&c., and which is not, I believe, in general use, is made by dissolving 1 oz. of bitter aloes, 2 ozs. of soft soap, and 1 oz. of sulphur in a gallon of water. Dip, syringe, or sponge the plants. It is both cheap and good.

I will now offer a few remarks about another garden pest—the slug. I envy that man his good fortune, who is not troubled by this marauder, defying all his attempts at its destruction by lime or soot. I remember one morning giving orders for pricking-out a quantity of Cauliflowers in frames, to stand the winter, and was told, after I had just found out that during the night slugs had destroyed six valuable plants in a Melon-house, that they had eaten nearly through the stems of all of them, even though lime had been used unsparingly.

Strolling along the seashore and seeing a lame sea gull, I gave chase, and was not long in securing him, and a fine sturdy fellow he was, too. I took him home and turned him loose in the garden, supplying him once a-day with a little fresh fish for a time until he became quite tame, and would follow the men all over the place, especially if he saw any signs of ground being stirred, when woe to that worm so unfortunate as to be seen. I soon found out, also, that the slugs had a most vigilant enemy, for "Jack," as we named him, soon discovered their haunts, and on a damp day would run along the Box edgings, or amongst Cabbages or Cauliflowers, picking slugs up at a magical rate. He soon proved to be the most effectual slug trap I ever saw, besides proving a determined enemy to many other garden pests, as woodlice, earwigs, and wireworms, for he was nothing less than a glutton, and never did I see him refuse meat of any kind, the result being, that very soon slugs were a thing never thought of. He was a large grey gull, the size almost of a goose, and all the attention he required was a large garden saucerful of water to drink; and to any one troubled with slugs I would say, if you can keep a sea gull you will have no need to fear your enemy, or worms on a lawn, for there he will be invaluable; only let one be seen and its death is certain.

—, *The Gardens, Golden Hill, Preston*.

BEDDING TRICOLOR PELARGONIUM.

INFLUENCE OF PARENT PLANTS ON SEEDLINGS.

A CIRCULAR leaf some will contend is indispensable, while others maintain that such a leaf is not able to withstand our seasons so well as an incised leaf. So much for opinions. It is certain, however, that if the leaf is destitute of a fine green centre, it is delicate, be the shape what it may; therefore, a fine green centre is indispensable. The leaf should also be perfectly flat or inclined to convex; colours well defined and bright.

I am led to make these remarks from learning that the censors at the Royal Horticultural Society's Exhibition of Tricolor Pelargoniums, gave the preference to varieties with circular leaves, instead of to incised leaves.

For the last three years I have taken a great pleasure in raising seedling Tricolor Pelargoniums, and when *Italia Unita* first made its appearance I was charmed with it; but the leaf, pretty as it is, has a wrinkled appearance. The plant is also a slow grower. I have raised hundreds of seedlings from it, and all more or less partaking of that fault—namely, wrinkles in the leaf; but at last I have succeeded in raising a seedling from it, the pollen parent being *Baron Ricasoli*. It is of excellent habit, the centre of the leaf is of a fine green, the zone is bright crimson, scarlet, and black, and the leaf is perfectly flat and free from wrinkles. As the leaves mature their growth they assume a convex appearance. Another most important quality is, that the leaves do not in the least damp in the winter season like those of other varieties of the section, but they are incised. However, with all its faults, I intend to exhibit this variety at the spring exhibition of Tricolor Pelargoniums, at Kensington, for the Floral Committee to decide on its merits.

Do seedling Pelargoniums derive their features more largely from the pollen parent, or from the seed parent? I have invariably found them more resembling the pollen parent than the seed parent. For instance: *May Queen*, one of the rose varieties, was crossed with pollen from *Sir R. Peel*, the result was nearly all the seedlings had scarlet flowers. Again, *Le Grand*, a fine *Noscegay* variety, crossed with the same, has given me splendid trusses of flowers, and many of them of fine circular outline, and all that could be wished for.

What improvement has taken place in the Zonal class in the last five or six years! They exhibit colours of nearly every

shade. The double-flowering varieties are also indispensable as pot plants, and ought to be grown in every establishment. Zonal *Aurantia striata*, a new striped variety, must also be added. This I have secured for crossing, as we may expect more novelties when it has been judiciously employed for that purpose.

I was pleased to see by a recent Number, that Mr. Wills has succeeded in effecting a cross between the Ivy-leaf and the Zonal sections.—E. S.

CUPRESSUS MACROCARPA.

At page 423, in the report of the proceedings of the Floral Committee of the Royal Horticultural Society, it is stated that "Mr. Jennings, of Shipston-on-Stour, sent plants of *Cupressus macrocarpa* variegata, very ornamental, but like *C. macrocarpa*, not always hardy." This statement as regards *C. macrocarpa*, although not positively incorrect, might so far mislead as to deter people from planting this grand Conifer, even in situations where it would thrive. I have an excellent specimen of it growing here (Blechningley, Surrey), now about 25 feet high. During its progress it has required considerable attention, but its beautiful appearance at all seasons of the year has amply repaid the pains bestowed upon it.

This plant was brought from a nursery in a pot in the autumn of 1855; its habit and hardiness were then but imperfectly known. It was immediately planted out, and in the following three or four winters, doubting its perfect hardiness, and fearing injury from north-east and east winds, to which it is fully exposed, it was protected by placing around it boughs of Laurels and other evergreens. The rapidity of its growth was surprising.

At the end of four years from the time of being planted out the tree became too large to allow of any protection being afforded it in severe weather. Then succeeded the memorable winter of 1860-1, when so many plants of this and other Conifers were killed. To my great satisfaction my *Cupressus macrocarpa* passed through the ordeal unscathed, while a plant of *C. Uldensis*, of the same age, standing 20 yards distant, was destroyed. From that time the tree has suffered a succession of mishaps from the wind. Owing to the roots of this species spreading near the surface, added to the weight and bulk of its rapid-growing branches, it offers an extent of surface for resistance to wind immensely out of proportion to its age and strength. My plant's growing in a light soil in which sand predominates, a soil highly favourable for most kinds of Conifers, especially to *Cupressus* and its allies, rendered its power of resistance to high wind much weaker, and still more so if accompanied by heavy rain. Several expedients were resorted to to keep the tree erect, but with little success; the supports at first applied were insufficient, and gave way one very windy day in April, 1863, when the tree was almost blown over. Stronger ones were substituted, these lasted for a time, but one very gusty day they were shaken out of their places by the rocking motion of the tree, and it was again at an angle of 45° out of the perpendicular. The soil on the side exposed was loosened by the distension of the roots, and many of these were drawn quite out of the ground.

One more effort to restore it. The loosened soil was removed in order to put the roots back to their places as much as possible; strong cords were carefully attached higher up than the supports had reached, around a thick band of matting to prevent strangulation, and secured at the opposite ends to strong stumps driven deeply into the ground; a good quantity of soil was also placed around the bottom of the tree, chiefly over the loosened roots. Excepting the somewhat absurd appearance of the tree being "moored stem and stern" this plan answered very well for a considerable time. In the summer the cords were removed, leaving the tree to grow unchecked, but were tied again in the winter.

Under such rough treatment the tree grew very much out of shape. Before the cords were attached the main stem had become curved, but was completely hidden by the branches and foliage. Recourse was had to pruning, timidly at first, but finding how beneficially it acted towards restoring the symmetry of the specimen, I became more confident, and have pruned vigorously ever since, sometimes taking off whole barrowloads of the ends of branches that protruded too much. For reasons which the practical horticultural reader will readily comprehend, this operation was only performed late in the autumn.

And now I come to the greatest catastrophe that has yet befallen my unfortunate tree. This occurred on the 10th of January, 1866. On that day all the south of England was visited by a terrific storm of wind, accompanied by a heavy fall of snow. The "moorings" were slipped, the enormous weight of snow broke down one side of the tree, excepting the lower branches, and the remainder was again at an angle of 45°, or something more out of the perpendicular. In despair of doing any good with my *Cupressus*, I resolved to chop it up, and should have done so had not Mr. Carson, one of our most experienced local gardeners, happening to call on me, strongly deprecated the sacrifice, dilapidated as the tree was, and kindly offered assistance to do the best to restore it. With the aid of three or four strong men the objectionable angle was materially diminished, a solid support again applied, and in the succeeding autumn another vigorous pruning given.

During the past summer so free has been its growth, that the injuries have to a great extent disappeared, and would scarcely be suspected by any one who had not seen it before. Fortunately, since January, 1866, no very high winds have recurred in this neighbourhood, and I am in hopes that it is now so firmly rooted, as to be able to withstand any future shock. It is, with the exception of a *Wellingtonia* and a *Deodar*, the finest single specimen Conifer that I possess, although its top is slightly inclined.

From the foregoing experience some useful hints may be gathered.

1. *Cupressus macrocarpa* thrives upon a light soil, and in an airy situation; but where practicable a spot should be selected more or less sheltered from the effects of high winds.

2. So active is the vitality of the species, that it will recover from great injuries.

3. It will bear pruning to preserve its symmetry, but should not be clipped. The operation should be performed with a sharp knife, and terminal shoots of every branch pruned must be left, for if the whole foliage of any branch be removed, I am very decidedly of opinion that the branch so treated would not "break," but in time die, and render the specimen unsightly at that place.

From observation of many plants in different places, I find 1 and 2 confirmed, also—

That where *Cupressus macrocarpa* is planted in stiff and heavy soils, its growth is much less free, the lively green of its foliage on which its beauty so much depends, becomes dull and less attractive, and the whole plant is divested of much of its ornamental qualities. This is simply a corollary of the preceding.

That if this Cypress is planted in contact with other trees or shrubs, the foliage of the branches in contact becomes thin and sparse, and eventually the branch dies off. This is true of all Conifers.

That the experience of the winter of 1860-1, with that of January, 1867, shows that in places where the temperature fell to zero, or within 3° or 4° of it, large plants of considerable height were killed. Hence in all places where the temperature is liable to fall so low, it is not advisable to plant *Cupressus macrocarpa*.

The power of endurance of many Conifers is remarkable. I have alluded to the snow storm of January 10th, 1866. While it lasted the branches of the *Wellingtonia* and *Deodar* collapsed like a lady's parasol shut up, and they remained under the enormous pressure "as firm as a rock." An Irish Yew was bent like a bow by the weight of snow upon its top. *Biota (Thuja) aurea* took the form of an inverted umbrella with some of its whalebone stays broken. I witnessed all this from within doors for some hours with extreme anxiety, but so violent was the wind, and so rapid the accumulation of snow around the dwelling-house, that it was impossible to afford any help. The rapid thaw on the succeeding day restored the plants to their natural shape.—ADOLPHUS H. KENT.

FRENCH AND ENGLISH GARDENING.

As Mr. Rivers states in his last letter that I went to France in "April or May," and "never saw" a French winter salad, you will, I trust, allow me to state that I went there on the 15th day of January last, when the snow lay upon the ground. Also, a word with reference to a letter in the number for November 28th, signed by a "STAY-AT-HOME GARDENER," and in which it is stated that my "letter by some means got into the columns of the *Times*," like that of a person named

Unlett, &c. The article was one of a series which I was commissioned to write eight months before the appearance of the one which gave rise to so much discussion. Hitherto I have used the only name which perhaps I should use in the matter, but as Mr. Rivers introduces the initials of my name, I now sign myself—W. ROBINSON, F.L.S.

[Here the correspondence on this subject closes.—Eps.]

TURN MOSS MARKET GARDENS,

STRETFORD, NEAR MANCHESTER.

These market gardens being celebrated for the quantity and quality of the fruit and vegetables grown in them for the supply of the Manchester market, a short description of some of the crops I saw there may prove interesting to your readers. Mr. Doran's successful mode of cultivating the Pine Apple and the Vine under difficulties may also be instructive to many.

The gardens are situated about four miles from Manchester, and are about ten minutes walk from the Stretford station. It is certainly one of the worst situations for a garden that could anywhere be found, being very flat, low-lying, and surrounded by pools and ditches of stagnant water. This is one of the worst evils Mr. Doran has to contend against, for frequently in wet weather the stake-holes have to be constantly relieved of water, which there is no means of draining off in the usual way. In order to keep the fires going men are frequently employed in removing the water, and during the long period of incessant wet weather we had in the autumn and winter of 1896 this must have been a very serious item of expense. It will, therefore, be perceived that gardening operations at Turn Moss have to be carried on under great difficulties.

I shall in the first place just go through the houses, only stopping to describe what I consider will prove interesting. Commencing at Mr. Doran's dwelling-house, which is situated at the west side of the gardens, the first structures used for horticultural purposes are four span-roofed Peach and Nectarine-houses, each 33 feet long by 11 wide. The trees are planted at each side of these houses in raised borders, and the stems are brought through the side walls just below the wall plates. The trees are in a very healthy state, and when I last saw them were loaded with fine fruit. These houses are filled in the winter with Strawberry plants for forcing. Two thousand pots are annually forced in the large Muscat-house, which I shall presently describe.

The next house is a half-span, 60 feet by 12. The border in which the trees are growing is nearly on a level with the front wall of the house, and their stems are brought through the wall in the same way as in the four houses described above. The roof faces due south. The back wall is certainly made the most of; it is built of sods, and at the time it was built small plants of the common Moss Rose were placed between the layers of turf. They grow very freely, seem to enjoy their position very much, and early in spring produce large numbers of beautiful buds, which find a ready sale in Manchester at a very remunerative price; so that in this case Mr. Doran not only obtains a fine crop of early Peaches, but also a profitable crop of flowers. The wall in the first instance would not cost much in building; one crop of Rose-buds would more than pay for it. This is what I consider making the most of everything.

After leaving this structure the next that we enter is the large Muscat-house, a span-roofed one, 65 feet long and 23 feet wide. It is strange to me how Muscats, or, indeed, almost any other kind of Grape, could be grown successfully in such a position as this, where the foundations of the house are nearly on a level with the large ditches of stagnant water close by. On my suggesting the advantages I considered would be gained by building the side walls of the houses 3 or 4 feet higher, so as to be able to raise the borders to that extent above the natural level of the ground, Mr. Doran told me that the winds from the south-west came across there with such force, that if the houses were any higher than they are the wind would sweep them away. By this it will be seen that Mr. Doran has to contend with two most destructive agents—wind and water. The house, also, is badly heated. Altogether, therefore, it is astonishing how such good results can be obtained under such difficulties; it is certain they can only be secured by constant attention. The Vines in this house are beginning to show the ill effect of their extremely wet quarters. Were it mine I should destroy them, do away with the side lights, which are about 3 feet inches in height, and fill up that

space inside with a good border, in which I would plant a fresh set of Vines. I imagine I hear Mr. Doran saying on reading this advice: "It is all very good, Mr. Wills, but where am I to force my two thousand Strawberry plants; and where are the thousands of punnets of small salad to be grown, and the large quantity of well-ripened pot Vines, which are cultivated for sale in this house?" My reply would at once be, "Why, build another house for Strawberry forcing, and another for the growth of your pot Vines, and make up your beds for small salads in a house of less importance." "But, then," would say Mr. Doran, "you have forgotten how much money I make out of this house with Tomatoes." "Granted; but hear me further. Grow your Tomatoes in pits, of which you have a large number just suitable for the purpose. In their present condition not more than half a crop can be expected from the Vines, and this not of a first-rate character; but alter the house in the way I have described and great results would be realised."

There is a bench about 20 inches wide all round the house, level with the bottom of the side lights. On this the Strawberries are forced, and a fine sight they are when in fruit. The floor of the house is principally covered with small salad during the spring and early summer months. Pot Vines are grown in a row on each side of the walk which runs along the centre of the house.

Leaving this house I entered the fruiting Pine-pit, which is 114 feet long by 19 feet wide, with a division in the centre. Here a magnificent sight met my view—a sight worth going a long distance to see. There were about four hundred Pines, all of one kind (Montserrat), the tops of the crowns appearing as level as if they had been clipped over with a pair of shears. Mr. Doran has kindly furnished me with his excellent mode of cultivating the Pine Apple, but I could not do it justice within the limits to which this communication must be confined, and it is, besides, worthy of forming the subject of a separate paper.

Crossing the brook I came to a lean-to vinery, 66 feet by 12, in two divisions; one planted with Muscats, the other with Black Hamburgs. In these excellent Grapes are grown. Leaving it I entered a winter Cucumber-house, which is 60 feet by 12. Here fine crops of Cucumbers are produced all through the winter and spring months. The next house I entered was also devoted to the cultivation of winter Cucumbers. It is span-roofed, 56 feet long and 14 wide. Mr. Doran has here introduced, for giving bottom heat to his Cucumber plants, a material which I think likely to prove valuable for this, or, indeed, any other purpose where bottom heat is required. It is cotton waste, a sort of refuse obtained from the cotton mills, being the husks of the cotton pods and the refuse of the cotton. It affords a considerable bottom heat for a great length of time, and is a valuable manure when decomposed. My attention was called to this valuable material for horticultural purposes twelve months ago by a mill owner and eminent horticulturist in the neighbourhood of Chichester. Mr. Doran speaks very highly of it, and considers it a grand discovery. It can be obtained very cheap in the neighbourhood of Manchester. The Cucumber plants appear to like the heat from the cotton waste very much; they were in excellent health, and promise to produce an abundant crop of fruit. The variety which Mr. Doran grows has been raised on the place, and is called Turn Moss. That it is a most excellent Cucumber for winter work I can say from experience, for I have grown nothing else for the last seven years, and have scarcely been without a Cucumber of good quality at any time during that period.

Near this last Cucumber-house is another Muscat-house, 95 feet by 19, in the centre of which is a raised bed covered with a fine lot of healthy pot Vines for sale; and next to this is a Black Hamburg-house, 114 feet by 19, which also contained a fine lot of pot Vines. In this house there was a splendid lot of finely ripened Grapes. The bunches were not large, but handsome, averaging about 14 lb. each; the berries were large and beautifully coloured, and the flavour all that could be desired. I thought it was not a Hamburg; Mr. Doran said it had long been there, and known under the name of Turn Moss Black Hamburg; both the wood and the foliage were more like the Alicante (Meredith's). Whatever kind of Hamburg it may be, it was a most luscious Grape, and of first-rate quality. In this opinion I am supported by Mr. Petch, one of our best Grape cultivators, who was with me at the time of my visit. The Vines had been planted many years, and a great portion of the roots were outside, and, notwithstanding the excellent results which Mr. Doran has obtained from these Vines in one of the most unsuitable places in the country for the

cultivation of the Vine, I still say it is a mistake to confine their roots between the inside walls, for by so doing the health of the Vines can only be maintained for a few years.

Leaving this house I entered other two, both early half-span vineries, each 60 feet long and 13 feet wide, and next to these a long range, 130 feet by 13, in two divisions. This house was planted with Lady Downe's and Alicante (Meredith's variety), in June, 1865. There are only three rows of four-inch pipe in the house. The Vines were in excellent condition, and most of them had on them two or three bunches of Grapes exceedingly well grown and ripened; some bunches of the Alicante would weigh not less than 3 lbs. The quantity of Grapes which this house contained would almost repay the cost of its being erected. The more I see of this fine Grape the more I am convinced that there is no Grape equal to it for winter work. The border in which the Vines are planted is about 4 feet deep.

The next structure to which Mr. Doran directed my attention was the Pine sucker-pit, which is 130 feet long and 8 feet wide. It contained three hundred and fifty suckers in fine condition. Next to this is the succession-pit, which is a three-quarters span, 144 feet long by 12 wide, containing about five hundred plants intended for fruiting next year.

I next entered two lean-to houses, principally used for greenhouse plants, and for growing flowers for cutting. The back walls were covered with some fine old Scarlet Pelargoniums. These are covered early in spring with a profusion of flowers, which, like the Moss Rose buds, are turned into cash, for any cut flowers are saleable in Manchester, and, of course, the better the kinds are the higher the prices they command; but there are many persons in the neighbourhood of Manchester who earn very good livings by cultivating even the simplest and most common flowers.

The last structure I entered was the large Mushroom-house, 75 feet by 20. It has a thatched roof, is heated by hot water, and is in every respect well adapted to the growth of Mushrooms; accordingly they may be gathered by the barrowful at any time during the winter months. There is a walk through the centre of this house, and on each side are the Mushroom-beds. There are, besides, two other Mushroom-houses, now in full bearing. After these beds are cleared off, the houses are used for forcing Rhubarb.

There are also long ranges of pits for Melons, Cucumbers, early Radishes, Lettuce, Celery, &c., and about 13 acres of ground, which was cropped during the past season as follows:—Celery, 2 acres; Onions, 1 acre; Lettuce, 1½ acre; Peas, 2 acres; Cabbages, 2 acres; Dwarf Kidney Beans, 1 acre; Scarlet Runners, 1 acre; Strawberries, 1 acre; Cauliflowers, 1 acre; Rhubarb, &c., 1½ acre. Not a foot of ground is allowed to remain idle. A crop of Radishes is taken off the Celery ground, then follow Cauliflowers and spring Lettuce, and so the rotation of crops is continued, thus showing how readily the earth produces abundance for the use of man if only properly cultivated and judiciously enriched. All young gardeners should spend a year and half, or two years, of their early life in a good market garden, where they would learn a lesson which would through life prove highly beneficial to them. Nothing is wasted, and everything is made the most of. This is as it should be, not only in market, but in private gardens.—J. WILLS.

COLEUS VERSCHAFFELTI.

THE Coleus has within the last few years become, and most deservedly so, an especial favourite, whether we view it as an ornament to the flower garden, greenhouse, or stove; and although it may be said to flourish in almost any soil that is of a light texture, yet in some situations gardeners complain of its not doing well, when, at the same time, a little more attention would in almost every place well repay the cultivator, and secure success. I consider this Coleus one of the greatest acquisitions which have been made for the flower garden in these days of banding colours, and perhaps the following details as to its cultivation may be useful to some of your numerous readers.

I find it absolutely necessary that the plants intended to produce a good effect in the flower garden should be well grown, healthy, and short-jointed, especially in cold situations like this. The first year I tried this charming bedding plant it partially failed with me, owing to my plants being small, and not well grown previous to being hedged-out, which never takes place before the first or second week in June.

In order to secure a good supply for spring, I insert thirty

or forty cuttings in August, keeping them all the winter in pots in the stove, as this plant requires heat to remain in good condition, and it well deserves a place there on account of its ornamental appearance. From the plants which these make I select my cuttings in March and April; these are struck in gentle heat, and, when well rooted, are potted off in 4-inch pots, and placed as near the glass as convenient in a warm pit with a temperature of not less than 60° at night. When the plants have been potted a week or two, the leading shoots are pinched out, which causes them to push freely. When the side-shoots have grown 3 or 4 inches, the plants have another stopping, and are gradually inured to the temperature of a cooler pit. I usually place mine in rows between Mrs. Pollock, Golden Chain, and Cloth of Gold Pelargoniums, and the result is a very pretty contrast, giving a neat appearance in spring, especially if plants of *Centaurea candidissima* are introduced. This *Centaurea* cannot fail to be a general favourite wherever *Coleus Verschaffelti* is cultivated as a bedding plant. The soil which I prefer is equal parts of loam, leaf mould, and sand, sifted through an inch sieve.

The foregoing mode of culture will secure beautiful, stout, bushy, and highly-coloured plants, from 9 to 12 inches in diameter, by the first week in June, and will, I trust, be acceptable to all who are about to give the Coleus a trial; for if this be a fair one, the plant will be found to well repay any extra trouble which its culture may involve, as compared with other bedding plants.—THOMAS RAWDENE, Woodseat, Ashbourne.

PROPAGATING MRS. POLLOCK PELARGONIUM.

I HAVE experienced no difficulty whatever in increasing the stock of this favourite bedder, if the plants were in good health, to commence with.

My practice is to take off the cuttings early in August. After preparing them I put them either in pots or boxes previously well drained, give a gentle watering, and place the pots or boxes in a cold frame or pit full in the sun. The cuttings only require a slight shading from the midday sun for four or five days. The lights should be drawn off on fine nights, and replaced early in the morning.

I have found the cuttings root quite freely in the open air, like other Pelargoniums, if their wants are attended to.

If good cuttings can be procured in February, they may be inserted in 60-sized pots, or several cuttings may be placed round the sides of 6-inch pots, well drained. Use for soil a good, light, sandy loam, a little leaf mould, and sand, well mixed. It is a good practice, if larger pots are used, to put a smaller one in the centre, the bottom being stopped up, and a little water kept constantly in this pot to preserve sufficient moisture in the soil. After the cuttings are placed in the pots these should be plunged in a bottom heat of 75° (the top-heat should be less), shading a little as recommended for summer striking.

When rooted, the cuttings should be potted off, using 4-inch pots, and the same kind of compost. They should then receive a gentle watering, and be placed as near the glass as possible in a warm greenhouse or vinery.

When the young plants have filled the pots with roots, they may be removed to a cooler house or frame. If larger plants are desired, they should be stopped, and again shifted into larger pots. If properly attended to they will be fine plants by the middle of May.

Summer cuttings make the strongest plants, and if kept in the pots or boxes in which they were struck they take up much less room during winter. These should be repotted about the middle of February, and treated as other Pelargoniums.

In hedging-out, many gardeners plunge the pots in which the plants are growing; when this is done the plants do not receive such a check as when planted in the open border or bed, for their roots are not disturbed. They may also be lifted with greater safety in autumn.

Sunset, I am of opinion, will make a prettier bed than Mrs. Pollock, especially when mixed with other plants, such as Verbenas, Lobelias, Violas, &c. I should like to know the experience of those who have tried it.—R. O. B. L.

PROLIFEROUS FERNS.

THE question as to the cause of Ferns becoming prolific under cultivation does not yet seem to have been settled; and from "FLIX-FEMINA'S" letter I see that it is doubtful whether

any *Polystichum* has been found to be prolific in its wild state.

We have now a list given by "*FILIX-FEMINA*," consisting of seventeen varieties of prolific *Polystichums*. Many of these have proved highly prolific, others perhaps only so for a season.

To the above-mentioned number we may add—

ASPLENIUM FONTANUM REFRACTUM.—A very interesting Fern with dark brown rachis, and bearing bulbs at the lower part of the rachis. It is very doubtful if this rare Fern has ever been discovered in Great Britain. Its history is very obscure, but I believe most growers of British Ferns include it in their collections.

SCOLOPENDRIUM VULGARE, var. *WARDII*.—One of our finest dwarf multifid forms. Mr. Lowe says it was raised by Mr. Graves, of Scarborough. A most prolific Fern. By pegging the fronds down young plants are easily raised, but without care and attention it is by no means easy to cultivate. I have a magnificent plant of this now growing in a damp greenhouse well shaded.

OSMUNDA REGALIS, var. *CRISTATA BULBIFERA*.—A splendid form, and prolific, as its name indicates. It was raised by Mr. Cliff, who possesses a plant now. Mr. Lowe and myself have also plants of this.

SCOLOPENDRIUM VULGARE VIVO-POLYSCHIDES.—A good prolific form.

SCOLOPENDRIUM VULGARE VIVIPARUM.—I have never seen a plant of this, but believe it is a prolific variety.

I found in Devonshire, a few years ago, a plant of *Polystichum angulare* of normal form, which is occasionally prolific, but only on one or two fronds. This plant grows in the open air, and was not prolific when found.

Two plants of a variety called *Scolopendrium crispum marginatum* (an inconstant form), were raised by a nurseryman in Birmingham from bulbs on a plant of *Scolopendrium crispum*. This occurred several years ago.

I do not consider a warm and damp climate essential to the full development of prolific Ferns, though in most instances, no doubt, damp atmosphere has originally been the cause of this.

I reside within two miles of the county of Warwick, and have a fine plant of *Polystichum angulare* proliferum growing out of doors in an exposed situation, and the fronds are literally covered with bulbs.—J. E. M.

THE COMMON WALLFLOWER.

My theme is a common one, though it requires more than a common amount of courage on my part to publicly approach it; yet as my remarks are intended for the common good, I will, even at the risk of provoking a smile, summon confidence, and boldly pronounce the common Wallflower a useful plant—useful as a decorative plant for the conservatory early in spring, when its fragrance is so delightful as to make one for the moment almost forget that the plant is but a common one—useful also for filling flower-beds in the autumn after these have been deprived of their summer occupants, and providing a refreshing green in place of the dead expanse of bare soil. Here the Wallflower may serve a double use; for if it is desirable or expedient to fill the beds with bulbs or annuals for an early spring display, these can be planted closely amongst the Wallflowers, and will thus receive a slight but by no means unsightly shelter, which will often carry them safely through the frosts and piercing winds of winter; and in the spring the Wallflowers can be cut out without injuring or displacing a sprig of those subjects remaining for the principal display. It is also useful for placing a few potsful, when in bloom, in the early Peach or orchard house, where the busy bees will "scent them afar off," and on a comparatively mild and sunny day will be attracted into the structure in large numbers, and will revel not only in the trusses of the Wallflowers, but also in the blossoms of the trees, and so be productive of good. Their cultivation, too, is very easy.

Sow the seeds in April or early in May. Prick off the seedlings in an exposed place, giving them plenty of room—say a distance of 12 to 15 inches apart; pinch out the top when they are 5 or 6 inches high, and by the autumn they will be fine bushy plants, their foliage resting on the soil, and with a top as flat and large as a plate. Such plants will be very different from, and much hardier and earlier-blooming than those left to grow in a semi-neglected state, by being allowed to spindle

in the seed-beds, receiving no stopping except too late in the season. Pot some of them in the autumn, and place them in a light airy house, bringing them on gradually, and in February and March they will present a rich appearance, have foliage curling over and half covering the pots, and from eight to twelve spikes of bloom of the uniform height of 8 or 10 inches. Such were my plants last spring, when, in a house gay with Camellias, Azaleas, and Roses, they were admired by everyone. Pot a few plants and try them; but if not prepared they will be poor in comparison with those which have had a little care bestowed on their cultivation.

The double varieties are also good for the purpose, the yellow being especially useful; but they do not flower so early as the common single—an important point; neither are they so fragrant.—J. W.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

CALCEOLARIA PISACOMENSIS (Orange red *Calceolaria*). *Nat. ord.*, Scrophulariaceae. *Linn.*, *Diadria Monogynia*.—"Certainly the handsomest *Calceolaria* that has been introduced for many years." Native of Peru, imported by Messrs. Veitch and Sons. It is too tall and stout for the usual bedding employment of the *Calceolaria*.—(*Bot. Mag.*, t. 5677.)

NYCTOCALOS THOMSONI (Assamese *Nyctocalos*). *Nat. ord.*, Bignoniaceae. *Linn.*, *Didynamia Angiospermia*.—Native of the Nikku Hills, near Gowahatty, in Assam. A climber; flowers white, and 7 inches long.—(*Ibid.*, t. 5678.)

DENDROBIUM BENSONIÆ (Mrs. Benson's Dendrobe). *Nat. ord.*, Orchidaceae. *Linn.*, *Gynandria Monandria*.—Native of Moulemein, whence it was received by Messrs. Veitch & Sons. Flowers white; lip with yellow centre and two purple spots.—(*Ibid.*, t. 5679.)

BEGONIA ROSEFLORA (Rose-flowered Begonia). *Nat. ord.*, Begoniaceae. *Linn.*, *Monoclea Polyandria*.—A lovely, stout, stemless herb; native of the Peruvian Andes at an elevation of 12,000 feet, from whence it was imported by Messrs. Veitch and Sons. Flowers dark pink.—(*Ibid.*, t. 5680.)

SACCOLABIUM HUTTONI (Mr. Hutton's *Saccolabium*). *Nat. ord.*, Orchidaceae. *Linn.*, *Gynandria Monandria*.—Native of Java. Imported by Messrs. Veitch & Sons. Flowers rosy purple; lip of same colour, but much darker.—(*Ibid.*, t. 5681.)

VITIS HETEROPHYLLA (Thunb.) var. *HUMULIFOLIA* (Hop-leaved Vine). *Nat. ord.*, Vitaceae. *Linn.*, *Pentandria Monogynia*.—Native of North China and Japan.—(*Ibid.*, t. 5682.)

CAMELLIA, *Contessa Lavinia Maggi rosea*.—"In the general character of the plant and in the build of the flower it resembles the striped kind, but the colour is throughout of a rich and peculiarly bright carmine rose—more brilliant, as it appeared to us, than that of any other variety of this class of colour. When to the size and quality of flower presented by the original *Lavinia Maggi*, this lovely and brilliant hue is superadded, no further praise is needed.—(*Florist and Pomologist*, vi., 261.)

NEW BOOK.

The Orchard-House. By THOMAS RIVERS. Thirteenth Edition. Longmans.

It is needless to say more than to announce that the 13th edition of this popular work has appeared, with much additional information as to the progress that has been made in the cultivation of fruit trees under glass since the last edition was published. "The vineyard under glass" promises to become one of the most attractive modes of Vine culture from the simplicity of its treatment, and the success attending it. At page 142 of "*The Orchard-House*," we find the following:—

"In *THE JOURNAL OF HORTICULTURE* for November, 1865, page 384, a very pleasing description is given by W. T. Gage, Esq., of Williton, near Taunton, of his vineyard under glass, which has been a source of much pleasure to him. He now writes me (October 10th, 1867), to the following effect:—

"I predict that vineyards under glass will be more common than orchard-houses, because all amateurs are not good gardeners enough to make the latter thoroughly successful, whereas the vineyard is much less troublesome, is pretty and charming, and yields without fire heat ripe Grapes from August to January. The Grapes of 1865 are far surpassed by those of this year. My heaviest bunches now weigh 28 ozs., and the Grapes have been exquisite in flavour. I seldom allow more than a dozen to fifteen bunches to remain on a bush or pyramid. To prevent the ground becoming too dry, and to enable me to leave off watering and syringing when the Grapes begin to colour, I

early in May, covered the surface with horse droppings, and on them placed a slight covering of reeds. This has answered well. All the shutters are opened before 7 A.M., to get rid of damp, a few are closed at 10 A.M., and the remainder at 4 P.M., to retain heat. The syringe is well used till the Vines are in bloom, and afterwards as required, till the Grapes begin to colour. I never allow the leaves of my pyramidal Vines to touch the glass, as they are apt to scorch, and besides that, they keep out the light and sun heat.

"I have only to add to this very satisfactory description, that the house is 30 feet by 14, and contains nearly forty Vines at 3 feet apart.

"It is the custom here to syringe the Vines once a-day about 6 P.M. and in hot weather to sprinkle the paths once or twice a-day. This practice keeps down red spider.

"The 14-feet-wide span-roofed orchard-house (see page 17), seems to me the most eligible and agreeable of all for a vineyard under glass. It should stand endwise, north-east and south-west, so that the sun may shine all the morning on the south-east side, down the middle about one o'clock, and on the north-west side all the afternoon."

GARDENERS' EXAMINATIONS.

THE results of the various examinations open to gardeners are now recorded for the past year. The most successful candidate is Robert C. Kingston, of the Royal Botanic Gardens, Kew, son of Mr. Kingston, gardener to Christopher Sykes, Esq., M.P., Brantingham Thorpe, Yorkshire.

At the Royal Horticultural Society's examination held at South Kensington in December, 1866, after two days' examination in theoretical and practical gardening, he was awarded the highest honour—a first-class diploma, and made an Associate of the Society. At the Society of Arts examination held last April he was awarded the following prizes and certificates—viz., Botany—first-class certificate, with Society of Arts' first prize of £5; also the Royal Horticultural Society's first prize of £5. Floriculture—first-class certificate, with Society of Arts' first prize of £5; also the Royal Horticultural Society's first prize of £5. Fruit and Vegetable Culture—second-class certificate. Book-keeping—second-class certificate, with the first prize of £3 specially given by the proprietors of the *Gardeners' Chronicle* to the gardener obtaining the greatest number of marks in practical gardening, coupled with mensuration or book-keeping.

At the examination of the Science and Arts Department of the Committee of Council on Education held last May, the result of which has recently been issued, in Vegetable Physiology and Economic Botany he was awarded a first-class certificate and a silver medal; in Systematic Botany a first-class certificate, with a silver medal; also as Queen's medalist he was registered a certificated science teacher on these subjects, and presented with a microscope as a prize.

ENTOMOLOGICAL SOCIETY.

THE December meeting of this Society was held on the 2nd inst., Sir John Lubbock, Bart., F.R.S., President, in the chair. Amongst the donations received by the Society since the last meeting, was a beautiful photograph of a portrait of the celebrated entomological anatomist Lyonnet. Messrs. W. C. Boyd, H. Druce, H. H. Haldday, and J. Ince were elected members of the Society.

Mr. Pascoe exhibited a Sumatran species of *Thysia* (a sub-genus of *Lamian* Longicorn Coleoptera), which he proposed to name *T. viduata*, and pointed out that the *T. trineeta* of Laporte was distinct from the India *T. Wallichii* of Hope. Specimens of the three supposed species were exhibited, which appeared to us rather to be local variations of one species. He also exhibited a box of new and very interesting Coleoptera from Lake Ngami, Ceylon, Sumatra, and Penang, belonging to different families, of which he read the descriptions.

Professor Westwood exhibited the unique British specimen of *Serropalpus striatus*, taken some years ago by Mr. Plant at Leicester; also the small globose mud nest of *Eumenes coarctata* (Atricornis, Curtis), which had been found near Reigate in July, 1866, attached to a twig of the common Ling. The interior was lined with white silk, evidently the cocoon spun by the larva previous to assuming the pupa state. The perfect Wasp had died in endeavouring to effect its escape through a small hole it had made in the nest. This rare species is the only British representative of *Eumenes*, a very numerous genus of solitary Wasps. Mr. F. Smith stated that he had occasionally found the nest in the neighbourhood of Weybridge, and in the New Forest, &c. He also exhibited a small block of Willow from Mitcham, in which within a very small space not fewer than ten burrows had been formed by the Leaf-entter Bee (*Megachile Willoghiella*), each burrow containing numerous cells. He had observed that occasionally these cells, which are of the size of a lady's thimble, are not uniformly composed of a single kind of leaf, but that whilst the outer layers of the case were of green Rose leaves, the inner

ones were sometimes composed of the petals of *Geranium*, wild Poppy, and Centaurea.

Professor Westwood stated that some years ago one of the patients at the Ilanwell Asylum had forwarded to him a small book, in which he had preserved and gummed down the leaves of many different kinds of plants which he had found in the garden of the Asylum to have been attacked by the Leaf-entter Bee.

Mr. Trimen read a paper "On some Undescribed Species of South African Butterflies," including a new genus of *Lycaenide*, to which he applied the name of *Delonira*, and which he considered as most nearly allied to the New World genus *Ennenia*. One of the most interesting of the new species described was a *Papilio*, the male of which resembles the well-known *Papilio Boisduvallianus*, whilst the female closely resembles the Danaid *Eucheria*. He also suggested that the common *P. Merope* of Cramer, of which he stated that males only have hitherto been taken in Africa, is no other than the male of *Papilio Ceneus*, which in its varieties resembles no less than three distinct species of Danaids, although it was admitted that in Madagascar the female of *P. Merope* precisely resembles the male, thus presenting a singular instance of compound dimorphism in the female sex. These observations led to considerable discussion amongst the members present.

NOTES AND GLEANINGS.

THE ROYAL HORTICULTURAL SOCIETY'S arrangements for next year have just been completed as follow—viz., Show of Hyacinths and Spring Flowers, March 14th; Roses and Spring Flowers, April 18th; Early Azaleas and Spring Flowers, May 9th; Great Show, 2nd to 5th of June; Special Prize and Pelargonium Show, June 16th and 17th; Rose Show, 30th of June; Great Provincial Show to be held at Leicester in conjunction with the Royal Agricultural Society, July 16th to 21st. The Tuesday Meetings and Shows of New and Rare Plants take place on January 21st, February 18th, November 17th, December 15th, and on the first and third Tuesdays in each month from March to October inclusive.

THE ROYAL BOTANIC SOCIETY of London has just published its exhibition arrangements for the ensuing year, which are as follow:—There is to be an Exhibition of Spring Flowers, commencing March 21st and closing on the 28th of the same month; and the great summer Shows are each to last two days, the first Show commencing May 27th; the second, June 17th; and the third on July 1st. In addition there will be the usual Exhibition of Rhododendrons, &c., which is to continue during the first fortnight in June.

THOSE who had the opportunity of seeing the large conservatory in the *Jardin reserve* of the Great Exhibition at Paris will regret to hear that it was completely destroyed this day fortnight (Dec. 5th), by a hurricane, which levelled it with the ground. The loss to the owner will amount to 140,000 francs, or £5600. What is, perhaps, as much to be deplored as anything connected with the catastrophe is that all the beautiful specimens of Palms, which were at the time in the conservatory, are also utterly destroyed.

WE have to record the death of Dr. C. G. B. DAUBENY, Professor of Chemistry, Botany, and Rural Economy, at Oxford. Dr. Daubeny was born in 1795, at Stratton, near Cirencester, in Gloucestershire, of which parish his father, an eminent divine, afterwards Archdeacon of Sarum, was then rector. Educated for the medical profession, he practised for several years at Oxford, but relinquished it in 1829, when he devoted himself exclusively to scientific studies. Dr. Daubeny has occupied the post of Professor of Botany within the University since the year 1834. This appointment is in the gift of the Royal College of Physicians, having been founded and endowed by the eminent Dr. Sherard, some time a Fellow of St. John's College, to which the late Dr. Sibthorp added a Professorship of Rural Economy, which was also held by Dr. Daubeny. His reputation as a scholar and as a promoter of philosophy is worldwide, and his fame in literary and scientific circles extends beyond the limits of his own country. He was educated at Winchester under the famous Gutch; and when he made his selection for Oxford he preferred the peaceable groves of Magdalen, to the classic Wykehamical cloisters of New College, for he entered as a demy at the former college at the early age of eighteen, giving certain evidence of his proficiency as a scholar by obtaining the Chancellor prize for the Latin Essay, in 1815. He took the degree of B.A., June 1st, 1814; that of M.A., March 5th, 1817; immediately after which he diligently prosecuted the study of medicine, proceeding to the first degree in that faculty in 1818, and to the degree of Doctor in Medicine, January 15th, 1821. He was an un-

deviating patron and admirer of the study of natural sciences, a warm advocate of the new studies of the University in that direction, which his care, attention, and zeal, coupled with extensive liberality in the Botanical Gardens, over which he presided so long, eminently substantiate.

WORK FOR THE WEEK.

KITCHEN GARDEN.

It may appear somewhat early to offer advice as to the preparations for spring; but such is the pressure of work soon after Christmas has passed, that no amount of precaution can be considered too great where general gardening has to be carried out according to the high practice of the present day. The first advice I would offer is to let no alterations, planting, or other work, interfere with the routine work of the garden. It is, undoubtedly, proper to plant all that can be planted in the autumn; but it is equally urgent to carry on the work in the kitchen garden and orchard. When such is delayed until spring there is sure to be a sacrifice of some importance. All the pruning, except that of Fig and Apricot trees, and most of the nailing of wall trees, as well as the training of espaliers, should be finished if possible by New Year's-day, and the same may be said of bush fruit. The making of borders or stations for fruit trees should be performed in autumn—indeed, where new soil has to be introduced, September or October is the most fitting time, as the best of soils may be seriously injured by moving them in a wet state. No time should now be lost, when the weather is unfit for out-door operations, in going on with in-door work. All matting or bast required for the ensuing year should be cut, sorted, and hung up ready for use. Besoms and baskets should also be prepared. The tool-house should be examined and put in order, and, in fact, everything of this kind that it is possible to do should be done. The Mushroom-house, when sufficiently roomy, is one of the most useful of garden structures. Sea-kale may be forced here in constant succession, with as little trouble as raising a crop of small salads. The old plan of raising a bed of fermenting materials over the crowns out of doors, is much more uncertain and troublesome. Rhubarb can also be forced without difficulty in the Mushroom-house. Nothing is wanted but a long narrow pit along the bottom of the house on one or both sides, the top of the pit being level with the floor. It should be 4 feet deep, and filled in portions, as wanted, with any hot, fermenting material to within half a yard of the top, which should be covered with a lid. The Sea-kale or Rhubarb should be placed on the fermenting matters as thickly as it can stand, and then fill in lightly with fine old tan. If this become too hot, say exceeding 85°, reduce the heat frequently with water, putting a handful of salt in about six gallons. Chicory roots may be placed in a circle round roomy pots, and set on the flues of this house. The Lily of the Valley, too, may be plunged overhead in a fermenting material with a temperature of 70° until the blossom-spikes appear, when it must be inured to the light, but in a most gradual and cautious way. Early-potted Hyacinths and Narcissus may be served precisely the same as the Lilies, taking care not to withdraw them until the pots are nearly full of roots.

FRUIT GARDEN.

Examine old fruit trees in order that such as are either unproductive, or bear fruit of indifferent or bad quality, may now be cut back preparatory to their being grafted with better varieties in spring. Deferring to cut large limbs of fruit trees till the sap is flowing is always injurious. The portions left die back much farther from the sections than will be the case if the operation is performed before winter, and canker is also apt to ensue, so that the grafts are left with an unsound footing. In heading back large trees, imagine one or two branches, the result of grafting, to proceed from each stump, and then cut the limbs so that the new branches may not originate too near each other. In some cases hedges form the outer fence of gardens. Quick, more especially, should now be trimmed; dead wood and unhealthy shoots liable to be half killed by insects in the summer are the consequences of cutting these hedges late in the spring, and nakedness at the bottom is occasioned by allowing the top to overhang. The sides of a hedge should slope regularly, like those of a pyramid; the top cannot be too sharp. If so managed the barbarous mode of plashing will be rendered unnecessary.

FLOWER GARDEN.

In this very changeable weather walks requiring turning, or

a coating of fresh gravel in the spring, might now have the aides or edges adjusted; gravel might also be had in readiness for use when wanted. Plants that have been protected during the frost should again be exposed if the weather continues mild. Ripe fruit or seeds of shrubs should be collected. Cones of Cedars, Pinuses, &c., may also now be gathered. Roll walks that have been loosened by the late frosts, and protect shrubs from hares and rabbits. After frost examine Polyanthus and Pink-beds, removing all weeds as soon as they appear. Now is a good time to collect leaves, which form invaluable compost. Attend to newly-formed Pansy-beds; if the worms are troublesome pour a little lime water down their holes; this will speedily relieve you of their presence. Remove Polyanthus blooms, and carefully observe, during a shower, whether any pots are exposed to drip; it is equally injurious to the Carnation and Picotee in frames as to the Auricle.

GREENHOUSE AND CONSERVATORY.

The introduction of the Chinese Chrysanthemums having necessarily caused a disarrangement of part of the stock, it becomes a matter of importance at this time to re-arrange it, so that groups or tribes may occupy situations according to their habits. Placing plants for effect should, if possible, be subordinate to this point in some degree, for what is the use of placing plants where they will not thrive? The Chrysanthemums decaying should be cut down, suffered to become somewhat dry, and removed to cold frames. Those who cannot afford frame room may secure them in some shed or out-house for a few weeks, covering them overhead with clean straw whilst the frost lasts. If they are slightly frozen here it will not signify, only take care that they do not thaw too suddenly. All plants should be carefully gone over, removing the dead leaves and tying-in straggling branches. The surface soil ought to be stirred a little, and some fresh mould added. These little points when attended to give a tidiness of appearance, and contribute to the enjoyment of such places during the dreary season of winter. Be careful not to be caught by frost. Keep out as much of it as possible by mats or other coverings, and have recourse to fires only when positive danger is to be apprehended.

STOVE.

The decoration of this house will depend in a great measure upon Begonias, Euphorcias, and *Luculia gratissima*, although the latter will bloom in a colder house. These should be carefully tied up and placed in the most conspicuous situation. It is always a good plan, where accommodation can be afforded, to keep some of them in a colder house, so as to prolong their season of blooming. Continue to keep up the temperature by artificial heat to 60°. Beware of exciting the buds of Orchids before their time, and keep a somewhat drier atmosphere until the middle of January.

PITS AND FRAMES.

Keep Roses in pots moderately dry until they are started for forcing. Every fine day the lights should be taken off *Verbenas*, *Petunias*, *Calceolarias*, and *Pelargoniums*, and stop such as are growing freely, or appear to be drawing.—W. KEANE.

DOINGS OF THE LAST WEEK.

Ice-collecting.—As expected last week, the frost continued for several days, and afforded an opportunity for collecting ice, though we did not begin on the Monday, as we ought to have done, and what we had on the Wednesday did not much please us, as it was impossible to procure it free from mud—a matter of importance as regards the future keeping, and also the appearance and sweetness of the ice, when taken out for use in cellar or larder. For cooling wine and for freezing liquid mixtures, the quality of the ice is of less importance, but ice cannot be taken from too clean water, and free from every taint, when it is to be used rarely for keeping things cool that are set upon it, but which are exposed to the same atmosphere as surrounds the ice. We have several times, when hard driven, been forced to take ice from very questionable places, where the water was such that we would have been very thirsty indeed before we would have partaken of it, and ice from such water, when it had been shut up in a box near the kitchen, and begun to melt again a twelvemonth after it was collected, would be as tainted as the day on which it began to freeze. It is of importance, then, that ice should be obtained from the clear water of a pond or lake, and more especially when it is used for so many delicate purposes in cookery and confectionary. A lump of clear Wen-

ham Lake ice may make a tumbler of water in the hot summer a delicious luxury, but it would be a very different affair if the ice had been taken from a dirty horse or farm pond, well coloured with liquid manure of all kinds.

Such ice would be good enough for freezing, and in many places such is the only ice that can be collected. Our own experience would lead us to the conclusion, that ice from muddy water does not keep so long as that from clean water, and in either case the ice that is collected when a thaw has commenced, as on Wednesday, does not keep so well as when housed with a keen frosty air, and one reason of that is, that if great care is not exercised at the landing place, it is almost impossible to avoid taking up mud and some decomposed vegetable matter with the ice, and every bit of such mud, or even a bit of rotten stick, from the air contained about and in it, helps to make the ice decay faster than otherwise it would do.

We have so repeatedly drawn attention to the principles and the practice of ice keeping in different circumstances, that it is quite unnecessary to say more than this to meet several inquiries, that unless for mere convenience, we would not think of making a great hole for this purpose, if it would be more convenient to have a double-walled house chiefly on the surface; and various modes of doing this in regular buildings, and in makeshifts, have been given in previous volumes. The house which we generally use is one of the old-fashioned egg-shaped wells with a long passage to it, and with but a single brick wall, and a fine lot of ice was left in it, though the well was not quite filled last year. For some years the ice melted away at the sides, leaving a hard wide pillar in the centre, and though we knew the reasons of this extra melting, we could not manage to attempt to remedy it until the last spring, and then we only did half of the necessary work, and we shall allude to this, as it may be interesting to others.

No doubt when this ice-well was made the top had been securely covered with a due thickness of earth, but as it stands in a favourite cover for game, and where provender is always placed for their feeding, in the course of years rabbits, &c., had scratched away the earth from the top, and they and the rats attracted by the provender had so burrowed around it that the ground became like a honeycomb of runs, which admitted the air all round the brickwork of the upper part of the sides of the well. In spring these holes were filled, the ground rammed, and from 18 to 24 inches of soil, also well rammed, placed over the top, bringing it in a slope considerably beyond the ice-well, and this has kept the well dry, and few holes have been made except on one side, and it is on that side that there has been a melting away of the ice this season, though not so much as there used to be. What we intended to do but could not manage, after the earth was beaten firmly in spring and a smooth surface obtained, was to cover it all over with coal tar, and beat into it an inch of gravel. Then we feel sure that neither rabbit nor rat would have found an entrance, and we have little doubt that the same quantity of ice would have lasted nearly double the time.

It may here be worth while stating, that though ice keeps remarkably well in nicely-covered stacks out of doors, it will not do so if rabbits and rats are to have their runs all through it, as then it will soon melt, and we know that these heaps have had to be discontinued, because where pheasants were regularly fed rats would become almost as abundant, encouraged no doubt by the plentifulness of the food. In many places such a stack will only do justice to the skill and care of the builder, when means are taken to keep all such vermin out; and the worst of it is, that a fence which they could neither pass through nor climb, would soon cost as much as a brick or a stone building. We have seen rats run up upright wire netting as easily as they would scamper over level ground, and, in fact, we know of no kind of fence that will keep them out if they are resolved to enter. One thing baffles them—namely, an upright plate of tin or sheet iron from 1 foot to 18 inches in depth, or a coping of the same extending horizontally beyond the post or fence for a width of from 6 to 9 inches. We once saw a rat run up a stout post stuck in the ground, more than a dozen times, and turn away baffled, that post being one of others that supported a bottom framework for a Wheat-stack, and what triumphed over all his persevering energy was merely a plate of tin fastened to the top of the post and extending beyond it 4 or 5 inches. As Wheat is generally even more valuable than ice, we could not help wishing that by such a simple plan hordes of rats might be deprived of the pleasure of doing almost as they liked with stacks built on the ground.

Tainted Water.—We are obliged to "D. H." for his recommendation of charcoal (see page 449). We had frequently used it for small quantities of water, but never thought of it in the present case. We will add that a little charcoal put into Hyacinth glasses will keep the water longer sweet, and be of benefit besides.

Protection.—We should be very sorry if in our desire last week to lessen labour to amateurs, we should lead them to be over confident and less careful. "AN ANXIOUS LEARNER" tells us he is afraid to leave his plants in cold pits, covered, and without air day after day, even in severe weather, and an experienced person tells him he will be sure to ruin all his plants. He would like to see whether we practise what we advise, and as he cannot do that conveniently, would we tell him what day we removed our covering last week? Here let us restate that such continued exclusion from light in cold, stormy weather, will only be safe, when the plants shut up are in an atmosphere too cold to encourage growth. We forget now how many days our plants, &c., in cold frames and pits were shut up, but apprehensive of sharp frost coming on Saturday the 7th, and not wishing to have much or anything to do in that way on Sunday, we gently turned and broke the surface of the litter on such places, without removing it at all, and threw a little more all over, as much as we thought would keep out from 10° to 15° below the freezing point. Between Tuesday night and Wednesday morning the wind changed, and the thaw came gradually. On Wednesday we were engaged with the ice cart, and were content for one day to let well alone. On Thursday the 12th, we partially uncovered to let in a little light, and in some cases, as Cinerarias, where the leaves seemed damp, we gave a little air. On the 13th we had everything uncovered wholly, and first gave air, and then as the day was fair, and there was a little dry wind, we drew off the sashes altogether for several hours, in order that the plants might be well dried, and thus be prepared for another covering up if a week or a fortnight or more of severe weather should come. Not a single subject suffered from the covering up, and the saving of labour when that has to be done with a great number of lights, is very great. We might have uncovered altogether on the Wednesday or Thursday, but after shutting up we think it safest to give full light by degrees. We suffered nothing from frost entering, and but little from rats, which found their way into several places, but at this time they did not meddle even with a lot of Cauliflowers with good heads, though they did a little injury by covering some small flowering plants over with the soil from the holes and runs they made.

Besides exposing by taking off the sashes, we drew a pointed stick between the thick rows of Calceolaria cuttings in a cold pit. Hardly one in thousands showed a sign of sickness, from shutting up, but they were as fresh and green as the day they were inserted, and though the tops had begun to move there was scarcely any movement downwards in the way of rooting. That will be all time enough. We shall be better pleased if they root after the New Year than before it, and for this among other reasons, that they will stand rougher treatment before rooting than afterwards. Another reason is, that when planted so thickly as ours, each cutting having only a space of 1½ to 1¾ inch, if they rooted early we would be obliged to thin and transplant earlier than we should have time and room for doing. Let "DISAPPOINTED," who fears his healthy cuttings will never root in the cold frame, throw his doubt to the wind. They will root all in good time. They will strike fast enough if he give them a little bottom heat, as he thinks of doing, but they will be none the better of it at planting-out time, and, again, after they begin growing in heat, they will want more attention to light and air giving, as there must be no continuous covering up in frosty weather then.

In frosty mornings and days did a good deal of wheeling. Proceeded with cleaning, charring and burning rubbish, weeds, &c. No better time could be had for collecting soils, and placing all earthenware pots under cover, or at least protecting them from rain and frost. Cleaned and rolled part of the pleasure grounds, and did what we could to catch and to drive away moles, which are threatening to be troublesome. We succeeded for a long time in keeping them out of our premises by daubing tar in their runs, but they have come in such numbers of late that we must trap, as, though we have no great repugnance to seeing mole-heaps on land, or even, now and then, on pastures, as the heaps make excellent top-dressings, we do not like to see them on fine-dressed lawns.

Much against our will, we have been obliged to stop the doings of tomtits, bullfinches, and other birds.—R. F.

COVENT GARDEN MARKET.—DECEMBER 18.

WE have very little to report upon here; business has not improved since last week, and the supply is quite sufficient for all requirements. Good Lettuces from Franco are now arriving three times a week. As usual at the approach of Christmas, evergreens are brought to the market by cartloads.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples ½ sieve	3	6	4	0	Melons..... each	2	0	3	0
Apricots doz.	0	0	0	0	Nectarines..... doz.	0	0	0	0
Cherries lb.	0	0	0	0	Oranges..... 100	5	0	10	0
Chestnuts bush	8	0	14	0	Peaches..... doz.	0	0	0	0
Currants..... ½ sieve	0	0	0	0	Pears (dessert) .. doz.	2	0	4	0
Black doz.	0	0	0	0	Pine Apples lb.	4	0	6	0
Figs doz.	0	0	0	0	Plums ½ sieve	0	0	0	0
Flubberts..... lb.	1	0	0	0	Quinces doz.	2	0	5	0
Coba..... lb.	1	0	0	0	Raspberries..... lb.	0	0	0	0
Gooseberries .. quart	0	0	0	0	Strawberries..... lb.	0	0	0	0
Grapes, Hothouse, lb.	3	0	6	0	Walnuts..... bush	10	0	15	0
Lemons..... 100	8	0	12	0	do. per 100	1	0	1	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes..... doz.	0	0	0	0	Leeks bunch	0	3	to	0
Beans, Kidney ... 100	0	0	0	0	Lettuce per score	1	0	1	6
Beet, Red..... doz.	2	0	3	0	Mushrooms..... pottle	2	0	3	0
Broccoli bundle	0	6	1	6	Must. & Cress, punnet	0	2	0	0
Brns. Sprouts ½ sieve	2	0	2	6	Onions.... per bushel	3	0	5	0
Cabbage doz.	1	4	2	0	Parsley..... per sieve	4	0	5	0
Capsicums..... 100	2	0	3	0	Parsnips..... doz.	0	9	1	6
Carrots bunch	6	0	6	0	Potatoes..... bushel	3	6	5	0
Cauliflower..... doz.	3	0	6	0	Kidney doz.	0	3	6	5
Celery bundle	1	0	1	6	Radishes doz. bunches	1	0	1	6
Cucumbers..... each	1	0	2	0	Rhubarb..... bundle	0	0	0	0
pickling doz.	2	0	0	0	Savoy doz.	0	9	1	6
Endive doz.	1	0	0	0	Sea-Kale basket	0	0	3	0
Fennel bunch	0	3	0	0	Shallots lb.	0	8	0	0
Garlic lb.	0	8	0	0	Spinach bushel	4	0	5	0
Herbs bunch	0	3	0	0	Tomatoes.... per doz.	2	0	3	0
Horseradish .. bundle	2	6	4	0	Turnips bunch	0	4	0	0

TO CORRESPONDENTS.

*. We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

BOOKS (*Mercy*).—Gordon's "Pinetum" with its supplement contains descriptions of all the species, but no plates. Lawson's work on the Conifers has coloured plates, but is very expensive. (*A Young Gardener*).—We know nothing of the new series you mention; but, of course, it could be obtained of the publishers of the first series.

BACK NUMBERS (*A. E.*).—You can have the twelve numbers you mention if you enclose forty-eight postage stamps with your directions, and restate the numbers you require.

THOMPSON'S GARDENER'S ASSISTANT (*W. S.*).—Your first number is right, but from page 17 to page 56 continue the Calendar, and then commences "The Gardener's Assistant."

MAIDEN TREES (*M. J.*).—Trees that have not borne, being only the year after grafting or budding, are so called by nurserymen. They were probably worked during the spring of last year. The eyed nails we depicted December 5th, are of cast iron; we should prefer No. 2, because it is less liable to break the eye in driving. We do not know their size, nor where they are sold. It is immaterial which way the eye is turned; we should be regulated in this by the position of the shoot to be trained to it.

PAYING FOR A GARDENER'S REMOVAL (*A General Reader*).—There is no rule whereby an employer pays the fare and for the removal of the goods of a gardener coming to him from a distance. It is a subject for special agreement.

GRAPES ROTTING (*A Friend*).—We can perceive no error in your treatment of the Vines, and if the berries rot after October it is a sign that they should be cut before, or else a little difference made in the ripening time, so as to have the berries plump and hard-ripened before the dull, damp weather sets in. Your covering the border in September, so as to keep wet out, and which has cured shanking, must also greatly help the keeping of the Grapes after they are ripe. We think that starting the Vines in the end of April, and leaving them to a great extent to themselves, except in cold damp weather, will cause the berries to be rather full of moisture in the autumn. To ensure the Grapes hanging well late we would advise the adoption of one of two courses: either to commence forcing by the middle or end of March, or, if the Vines are allowed to break naturally, to give more fire heat afterwards, so as to have the Grapes ripe in September. That is quite late enough for Grapes to be fully ripe if they are intended to hang through part of the winter. A late-ripened Grape rarely keeps well.

VINES (*J. C. W.*).—We cannot state the number of Vines you want, not knowing the size of the house; but, for earliness, we would plant Dutch Sweetwater, Buckland Sweetwater, Black Hamburgs, and one or two Muscats in the early house. In the second house we would chiefly have Muscats, with one or two Hamburgs, and the third house we would give up to Trontham Black, Calabrian Raisin, Lady Downe's, and Gros Guillaume, all good hanging kinds. We cannot name plants from seeds.

VINE LEAVES NOT FALLING (*Cliftonensis*).—The Lady Downe's Vine retains its leaves longer than most kinds; but as soon as they acquire a yellow tinge they do so more good to the Vines, and may be cut off at once. Their not falling is of no consequence. We have allowed a number of leaves to hang in a late house, though almost yellow; but our object has been to save the fruit beneath them in the case of a sudden frost, and they are too dry to encourage damp. But for the shelter, they would be better away. We would never surface a Vine border with grass, except in the case of a late house, say with fruit ripe and cut in September and October. Such a grass-covered border, if sloping, will be dry, and, other conditions being suitable, the roots will be encouraged near the surface. The chief objection in the generality of cases is that the turf will prevent the soil being so heated by the sun's rays as it would be in summer with free exposure. The more rough and long the grass was kept the more it would act against the free absorption of sun heat. On the other hand, such a turf-covered border would be warmer in winter than an earth one exposed, and that in proportion to the length of the grass upon it.

TWO PLANTS IN ONE POT (*A Young Beginner*).—If the prize is offered for a stated number of dissimilar plants, you cannot exhibit two of one sort in the same pot, nor even in separate pots.

EXCLUDING RABBITS (*A Subscriber*).—For fixing your wire netting to keep out rabbits see "Doings of the Last Week," page 426. The simplest and best mode is to sink the net 2 or 3 inches underground. We are tolerably secure with two-inch-mesh netting; but we would prefer the mesh to be from 1½ to 1¾ inch, as a rabbit to pass through it must be very small. Of course the smaller the mesh the better, but the higher the price. If this netting is to be fixed against a hedge or open fence 4 or more feet in height, then a height or width of 24 inches will be ample; but if there is no fence, and the wire depends entirely on stakes 4 feet or so apart, then that height may keep out rabbits, but it will be nothing to hares, and for them the fence should be 3 feet in height.

CHEAP STRUCTURE FOR STRAWBERRY FORCING (*F. I. C.*).—A pit or frame heated by a flue, and the pots set on a sloping stage near the glass, will be the cheapest, and will do admirably for Strawberries. For a good substantial structure there was an engraving given some time ago in the description of the gardens at Enville (vol. vii., page 354); but we would be glad to have a pit we could devote wholly to their culture, with a stage for the pots to stand on. The heavier glass is more valuable, chiefly on account of its strength. The quality of all is regulated by price—as firsts, seconds, thirds, fourths. The last is used for common purposes, but it is more wary and spotted than the better qualities. The common or hinged ground vineries are intended to be closed at the ends; but for any particular purpose of course a small opening may be left.

ANGLE OF ORCHARD-HOUSE ROOF (*C. T. H.*).—There is no better angle than 45° for general purposes; but for an orchard house at that angle the front wall would have to come near the ground, and the trees there must be trained to a trellis, leaving an open space of 4 or 5 feet between the trellis and the back wall if the trees are to be productive to the bottom of the wall. This is a very good plan for a house. Where there is to be a front wall, and lights from 4 to 6 feet in height, such a plan could not well be followed, because it would require such an elevation of the back wall; and in this case the front glass makes amends for a more level roof. In the quadrant referred to, page 751, vol. iii., New Series, we prefer calculating from the C side of the quadrant, as most in use among British gardeners; and where such front glass is wanted we would be satisfied with an angle of from 55° to 60°. As you refer to that volume we do not see how the matter can be made clearer. It does not matter which side of the quadrant you adopt, provided you know what the definite result will be. We would have from 20 to 24 inches above the concrete. Mr. Rivers treats chiefly on trees in pots, but tells how they may be managed in little space when planted out.

HEATING BY A STOVE (*Broughtonian*).—In a house 12 feet by 7, 9 feet high at the back, and 6 feet in front, and half of that glass, we should have thought a small-sized stove would have suited you. You will find much to suit you in our small manual on "Heating," which you can have free by post for seven postage stamps. Meanwhile we can easily see the chief causes of your trouble—the dirt on the leaves of your plants, the want of combustion, &c. For such a small place we do not think it would matter much where your stove was placed. It might go under your stage as well as stand in the middle of the house; or it might stand nearer one end than another. We disapprove of all stoves for plant houses that, like yours, are fed from the top, the up lifting of air purpose, as it is almost impossible to prevent the escape of dust, smoke, and deleterious gases every time the fire is replenished. We also object, though in a less degree, to the smoke pipe proceeding from the top of the stove, as the heated air thus escapes too easily instead of circulating round all the stove. We would advise you, then, to exchange the stove for one with a furnace-feeding door and aspirator door in the usual way. The latter may be a drawer to take out and in to remove the ashes. We prefer a stove with a flat head to a round one, as then we can place a vessel of water on it when necessary, to neutralise by evaporation the heat that would be too dry. We approve of the horizontal pipe going from near the top of the stove, as the heated air is thrown back from the top before it reaches the pipe; and if, as often advised, the firebox is free of the sides of the stove for an inch or two, that heated air will warm the stove from top to bottom, and yet no part will become unpleasantly or dangerously hot. Your horizontal pipe of 4 feet is too long; it should not be more than from 20 to 24 inches in length before it takes an upright direction. No such small stoves do well with a long horizontal pipe. The size of your pipe is large enough; even a three-inch pipe would answer well enough. We some time ago detailed how we were troubled by a horizontal pipe from an old stove, because then we durst not show a pipe chimney. We have had no difficulty since we shortened our horizontal pipe to 2 feet, and then took a nine-feet-long three-inch cast metal pipe from it up through the roof, making a hole for it in a square of zinc, and merely placing the square of zinc in instead of a square of glass. We could do this simply, because, partly for concealment, we had sunk

our stove nearly below the floor level. We merely, therefore, made a dry cesspool with bricks round our short horizontal pipe, placed two pieces of iron across for our nine-foot length of pipe to stand on, and brick-and-plastered it up; and by removing a brick or two we can clean at any time, or take down the pipe and clean it. We kept the late frost out of a house with this stove, although the house is fully seven times the size of yours. Such stoves do best with coke well broken, or nice clean cinders, with a few nodules of coals to light. When a fire is needed only now and then the furnace should be carefully cleaned out with the hand, and if the ashes are very dry damp them a little. When a fire in severe weather is wanted continuously and clinkers may accumulate, it will be desirable to let the fire fall low, and then pour in cold water to cool it, shutting the door that the steam may go up the chimney before cleaning and relighting. When fairly set going, by leaving the ashpit door open, you must regulate draught by the openings left there. We find that a long and slow combustion that keeps the most of the heat about the stove is then kept up by an opening an inch long and a quarter of an inch wide. As to other modes, such as putting a boiler in a shed at the end of a greenhouse—if, as you say, you must study economy, we would advise giving a fair trial to the stove first, as hot water is always expensive for such small places. You say you cannot have a flue, though with that shed at the end of the greenhouse it would surely be as easy to have a flue as a boiler; and if the levels would admit of it, a five-inch-wide flue under the floor, the tiles that conceal it forming the path, would be a very simple, effectual, and neat mode of heating the house, and you would always have a comfortable path in winter. If resolved on hot water, a small conical or saddle-back boiler will suit you, and then three three-inch pipes, as you propose beneath your stage, would be ample. Before we resorted to it, and if we wished to escape all dirt and additional expense and to use what we had, we would knock out a part of that shed wall, shorten the horizontal pipe of the stove, place the stove in the opening, surround it with a chamber, leaving only access to the feeding place and the ashpit door, and thus let the heat without the dust into the house. On the opening opposite the stove in the house we would fasten a piece of tin or plate iron with a four-inch-wide opening at the top and the same at bottom, and we should be surprised if the heat from the stove did not diffuse itself over the house. Let us hear, and you will have our best attention.

HEATING A PIT (Man of Kent).—For efficiency and economy combined, you could scarcely have done better than have adopted the plan recommended to a correspondent on the 23rd of May, to which you refer, and have done all your heating by a flue in such a small place as a pit with four lights, and in the way there stated. By having more openings from the chamber you could easily regulate the heat to the plants on floor or stage, and you would have been troubled with no steam, &c. As you have made the pit 5 feet deep, and have bricked trenches on each side for linings, and hot-water pipes for top heat, we can have no objection whatever to the arrangement, only it seems a round-about way of effecting the object; but it will be a good one for obtaining a supply of rotten manure. If your simple hot-water apparatus cost you little, all well; but we never like to recommend hot water for small places, as so much heat is lost up the chimney. You might have taken your flow pipes round your pit for top heat, and returned them beneath the bed for bottom heat, and thus dispensed with fermenting material; but, if you like the fermenting material, it is all right. We would not, however, have had the pipes so near the glass in front. Your moveable frame to use in training Cucumbers, &c., is all right enough, and also the frame for the plants to stand in. These, though near the glass, will not be subject to injury from sudden frosts, owing to the air beneath them. We do not quite understand how your one-inch piping is made into a coil and fixed into brickwork, we presume to be acted on by the furnace fuel; but your taking this one-inch coil pipe into the pit and connecting it with two-inch pipe is all right enough, and so is your twelve-gallon cistern supplying the coil air pipe for heating pipes; but it may be as well to have the cistern connected with the bottom of the coil, and the return heating pipe to be fixed to the coil at its lowest point. You seem to be able to obtain quite enough of heat; from 45° to 50° is quite sufficient for your plants, and 10° lower would be better than higher in cold weather. You may place the late-inserted cuttings in the warmest end. You must make very sure of your air-escape pipe, and let it go entirely out of the house or pit at an elevation of a couple of feet higher than your supply cistern; and to keep it clean it is well to bend down the point. The boiling of the supply cistern, the hissing and spitting in the pipes, are the consequences of having too much fire at the time for such a small place. In such circumstances the water in the coil is apt to be turned into steam, and this, if it does nothing else, will cause an overflow in the pipes and cistern. When you become used to it you will find that, after the requisite heat is secured, little fire heat will be needed to keep it up. We think what we have said of the coil and cistern, and especially to guard against a fierce fire, will remove danger and difficulty; but unless due care is exercised there is danger with small coils in such small places. Of course your air pipe is at the highest point. We do not like the idea of your Calceolarias standing on the tile floor, 5 feet from the glass. Give them in preference a cool bottom by standing them on moss or ashes near the glass.

MANAGING A FIRE (J. L. L.).—We would have been able to assist you better as to lighting and managing your fire, if you had told us what kind of fire you used. As you allude to the mode of lighting a stove, mentioned in "Greenhouses for the Many," we think you had better refer to Mr. Carman, of Newgate Street, London, who supplied the stove, fuel, &c. From the context we learn, or suppose, that the stove was a fuelless or chimneyless one, had a moveable fireplace that could be lifted out of the stove, and that the stove was carried out of the house to be cleaned, lighted, and set burning well, and only lifted in when the heat was well up. Even then, the writer says, there was an unpleasant smell, though the stove chiefly acted as a reservoir of heat, just as a large earthenware or iron bottle filled with hot water would do, until the water slowly cooled and the bottle wanted refilling. We are well aware that the manager of the kitchen fire likes no interference with her domain in respect to taking away fire to light stoves or flues, &c. We have repeatedly stated, that we look on all such chimneyless stoves with prepared fuel as mere makeshifts, and though useful at times, and especially in airy places, we do not like to recommend, in general, stoves that require prepared fuel, and that have no outlet for the products of combustion. If you have such a stove, as alluded to by you, you can easily light it out of the house without troubling the household, by using a little dry straw and shavings, dry wood, and a few small pieces of coal, and

when that is coked and bright, add the prepared fuel. We would, however, greatly prefer a stove with a pipe-chimney, and then we would use a little straw, shavings, or paper, and fine-split dry wood for lighting it, add a few pieces of dry coal, and when burning well, put on broken coke or clean cinders. There need be no difficulty in the matter. A small shovelful of bright red coals from a fireplace might save a few minutes in waiting; but, then, the carrying even that into your house smoking does no good, and, therefore, lighting the fire at once will often be the best. See other answers about stoves and heating this day.

DAISIES ON A LAWN (M. B.).—Your lawn will not be injured by uprooting the daisies at this time of the year.

CRAB TREE UNFRUITFUL (Scotus).—The causes of a fruit tree blooming profusely, but yielding no fruit, are too many for us to be able to decide without data on any particular instance. The pistils or the stamens may be defective; the tree may be overshadowed, or it may be overluxuriant, &c.

BOTANICAL NAMES (J. J.).—*Campanula* and *Wahlenbergia hederacea* are identical. We know of no other name for the genus *Antirrhinum*; but one of its species is now called *Dondia eipactia*, and another *Pozoa coriacea*. We have no other specific name for *Medicago sativa*. A variety of *M. falcata* was called *M. sativa*, with pale blue flowers.

POND MAKING (De Foir).—The making of a pond is, as to form, entirely a matter of taste. All that we can assist you in is making it water-tight. You will first of all excavate for the pond. It is unnecessary to cart away the soil coming out, as you may throw it up in the form of a mound, or make two or more of it, and if you wish to introduce rock-work the mound will assist you. Having excavated the site, making a hollow of 1 foot, and 6 feet in the deepest part, bearing in mind that the water will have a plane surface, consequently the soil must be placed in the hollows all around, so as to retain the water to the depth required, you ought to procure a quantity of good stiff clay. Lay it on in thin layers to the thickness of not less than 1 foot, ramming it firmly. You will find full particulars for the construction of ornamental sheets of water and the plants suitable for these in vol. v., New Series, pages 225, 247, 251, 312, and 330.

BERRBERRY HEDGE (R. B.).—The common Berberry is most expeditiously raised from seed, which may be sown in beds in sandy soil during March or April, covering about half an inch deep with fine soil. By autumn the seedlings will be fit to transplant, and should then be planted out in beds, allowing 6 inches between the rows, and 3 inches from plant to plant in the row. By the following autumn the plants will be fit to plant out, or if left another year they will be strong. We are not aware that it can be readily propagated from cuttings. You may obtain two or three years' seedlings from most nurseries, and plant the hedge at once. The plants should be about 1 foot apart.

COLEUS VERSCHAFFELTI DAMPING (C. H. M.).—Your plants of this *Coleus* would have been all the better if they had not been left out so long, or, indeed, been placed out at all after they had become rooted. Had you potted them off singly in small pots, and given them as much heat when you had them starting out of doors as you are now giving them, you would have had a very different result. We can only advise you to continue them where they are, and keep them gently growing during the winter, being careful not to give more water than is sufficient to keep the foliage fresh. Avoid wetting the leaves, and maintain a temperature of from 55° to 65°.

CULTURE OF COLEUS VERSCHAFFELTI MARMORATA (Cambridgeshire).—We apprehend your plants had, prior to your receiving them, been grown in a much higher temperature than that you are affording them, and they have consequently received a check from the cold occasioned by the journey, as they no doubt were young plants fresh from the propagating-house, or but recently repotted, therefore kept in heat. Your only plan will be to give them no more water than is sufficient to keep the foliage from flagging, and to afford them all the heat you can. They are suffering from cold. The temperature you name should be that of the night instead of day, and the only remedy is to afford more heat, or a temperature of from 55° to 60° at night, and 65° by day, giving water sparingly; but we fear the plants are beyond recovery.

HEATING A TANK AND SMALL HOUSE (Idem).—The best and surest boiler for your purpose would be a saddle boiler, which, upon your sending particulars of the size of the tank and length and width of house to be heated, any horticultural builder could furnish you with. It would be necessary to name the number of feet of piping, or the temperature desired, just as you require the house for a stove, greenhouse, or propagating house.

CHINESE PRIMULAS TO FLOWER AT CHRISTMAS (Ere).—To have these in flower at Christmas the seeds should be sown in March or April, in pots or pans, in a compost of equal parts of light turfy loam, silver sand, and leaf mould, adding about one-sixth of silver sand. The pot or pan may be half filled with the siftings of the compost, the pan being well-drained, and then fill it to the rim, or to within a trifle of it, with finely sifted soil. Level the surface and scatter the seeds rather thinly, covering lightly with fine soil. Give a gentle watering, and place the pots in a mild hotbed and near the glass, being careful not to overwater, and yet to keep the soil moist. When the plants are up admit air, continuing them in the hotbed until they have made two or three rough leaves; then harden them off and remove to a greenhouse, and when thoroughly hardened pot them off singly in small pots in the same compost as that used when sowing the seeds. After potting place them in a cold frame, shading for a few days, and keeping close until they recover the potting, after which give abundance of air, and keep well supplied with water. When the pots are filled with roots shift the plants into pots a size larger, and continue them in the frame. When the pots are again full of roots, the plants should be placed in their blooming pots, which may be 6 inches in diameter. It is necessary to have the pots well drained, and the compost somewhat rougher than it was previously, merely chopping it and making it tolerably fine with a spade. The compost may consist of two-thirds turfy light loam, and one-third leaf mould, and to this may be added one-sixth each of pieces of sandstone about the size of a hazel nut, charcoal of the same size, and silver sand. The plants should be again placed in the frame, and continued there until October, affording them copious waterings and abundant ventilation, with protection from heavy rains; but gentle showers will be very beneficial, during which the lights may be drawn off. All flower stems as they appear may be kept closely nipped off until October, when the plants ought to be removed to

an airy shelf in the greenhouse, where they will soon show for bloom, and come into flower about the time you wish.

ONCIDIUM LANCEANUM, **O. LEUCOCILLUM**, AND **DENDROBIUM PUEBLIUM** CULTURE (*Fulstaf*).—The two *Oncidium*s are best grown in pots two-thirds filled with broken pots or crocks, and then filled with a mixture of chopped sphagnum and fibrous peat, adding a small proportion of white sand. This compost should be made rather firm, and it should be raised in the centre of the pot, in the form of a cone above the rim of the pot, placing the plant or plants on the top, and covering the roots with moist peat. The *Dendrobium* would be best grown on a block of wood, with, on the plant side, a little peat on it, covering the roots lightly with sphagnum, firmly securing all to the block with copper wire. The best time to do this is in spring, just when the plants are beginning to grow. They should have a house in summer, or during the season of growth, in which the temperature is from 65° to 80°, sprinkling with water overhead twice or thrice daily, and the atmosphere should otherwise be kept moist. Shade from bright sun should be afforded them in summer, with a moderate supply of air. When the growth is made the moisture ought to be diminished, and the plants should have more light and air. They should have a heat of 60° at night, and from 60 to 65 by day in winter, no water being given, except a sprinkling occasionally to keep them fresh; but on no account have them wet, as that will occasion the roots to rot, whilst if you give them moisture and heat they will start prematurely into growth.

GRAFTING A CACTUS (*A. B.*).—You do not state the name of the Cactus. **FROGS IN A TANK**.—"Mercy" says—"In the Journal dated December 5th, Mr. Fish observes, that frogs get into his tanks, but they never get out again. If he will put into the tank a strip of wood—say, from 4 to 6 inches broad, he will find they will go down and have a bath and return safely without the penalty of staying there till death relieves them. The strip should lie in a slanting position from the edge to one side, so that they can travel up it easily."

STRAWBERRIES FOR FORCING (*Inquirer*).—The sorts of Strawberry we would prefer for forcing are the following. We name them in the order of their earliness:—Black Prince, Keens' Seedling, Ingram's Prince of Wales, British Queen or Caroline Superba, Ingram's Prince Arthur, and Sir Charles Napier. The first two are the earliest. Sir Harry is an enlarged Keens' Seedling, and bears travelling well. Myatt's Eliza and President also bear carrying well.

FLORIST'S FLOWERS (*Country Rumpkin*).—Florists' flowers are those which, by their beauty or fragrance, power to produce permanent varieties, and facility of cultivation, are so largely in demand as to render them especially worthy of cultivation as an article of commerce. Mr. Glenny has justly enumerated the necessary characteristics of a florist's flower to be—1st. The power to be perpetuated and increased by slips and other modes independent of its seed; 2ndly. The power to produce new varieties from seed, capable, like their parent, of being perpetuated; and, thirdly, it must possess sufficient interest and variety to be grown in collections.

LILIUM MONADELPHUM (*Variety*).—The variety called *superbum* is only a fine variety of *L. monadelphum*. We do not know where it can be obtained, although it is grown in Kew Gardens.

DESTROYING CRICKETS (*An Anxious Inquirer*).—Your best plan is to lay poison for them, and that is readily done by spreading phosphorus paste on slices of bread in the same manner as butter on bread, and lay these at night near their haunts, removing the poisoned pieces of bread in the morning and burning them. The crickets, if they partake of the phosphorus paste, will be lying dead near it. Being very partial to oatmeal, this may be given mixed with arsenic at the rate of 1 oz. of arsenic to half a pint of oatmeal, adding a little ground aniseed and caraway seed. If these ingredients be mixed and laid on pieces of paper in convenient places (at night only, or where no domestic animals have access), the crickets will partake of them greedily. You will best succeed by tempting them with the oatmeal and aromatics only for a night or two before offering them the poisoned mixture.

APPLES FOR COLD SITUATION (*R. Hammond*).—Devonshire Quarrenden, Early Julien, Kerry Pippin, Yellow Ingestrie, Court of Wick, Sykehouse

Russel, and Wyken Pippin. These are all dessert Apples. There is no separate work on Gooseberry culture, but you can have "Fruit Gardening," from our office free by post if you enclose five postage stamps with your address. It contains full directions for Gooseberry culture.

SEA-KALE (*G. C. B.*).—Your plants are probably nearly worn out. We are unable otherwise to account for their throwing up five or six mere leaf-stalks. We know that old plantations are liable to do so, and especially plants that have produced an abundance of flower-stalks in the previous season. The only remedy that we know of, is to make a new plantation of young plants, and to keep all flower-stalks cut off to within one or two leaves of their base, not allowing them to flower, much less seed, under any circumstances, for upon well-developed crowns depends the supply in the ensuing season.

SIX GREENHOUSE PLANTS FOR EXHIBITION (*W. H. M.*).—Six greenhouse plants to flower at the end of June are—*Primula Hendersoni*, *Tremandra verticillata*, *Leschenaultia Baxteri* major, *L. formosa*, *Gentyllis tulipifera*, *Eriostemon intermedius*, and two more to make sure of half a dozen, *Apocynum macrantha* purpureum, and *Phaenocoma prolifera* Barnesii, all succeeding admirably in a cool, airy, light greenhouse.

INTERMEDIATE CROCKS (*Amateur*).—Intermediate Cocks are biennials, flowering from May to June, they being sown in the June or July of the preceding year. The German Ten-week large-flowering varieties would, if sown in spring in a frame, flower finely in August, continuing until late in autumn, and are very desirable. They will suit you, being of several shades of purple, scarlet, and white. If you wish them to flower in July, the seed should be sown in March on a mild hotbed.

PROTECTING PEACH TREES (*E. F. W.*).—Peach trees do not thrive any better if protected with netting from the commencement of winter until the spring frosts are over. No protection should be afforded until the buds are fairly open, or the blossoms show colour; then protect them with netting as you propose, letting it down at night and taking it off by day, unless the days are foggy or frosty, but on no account let it be over the trees when the sun is bright and powerful. The netting should be fixed to the under side of the coping and close to the wall. Protection should be given until danger from frost is past.

PLANTS INFESTED WITH SCALE (*A Gardener*).—We cannot name plants from a small twig; flowers are necessary. The leaves and stems are suffering more from scale than any specimen we remember to have seen. Your plant being so fine a specimen, we should certainly try to clean it. Methylated spirits of wine applied to the leaves with a brush would certainly kill a great many, and you will have seen what Mr. Pearson stated at page 351, as to his success with Fowler's insecticide, which we should certainly try.

CHARCOAL MAKING (*Idem*).—You will find this subject fully treated of in No. 88, Vol. III., New Series, page 701, but the article, occupying a page, is too long to reprint. You can have the number free by post from our office for four postage stamps.

CUTTINGS OF FRUIT TREES (*An Amateur*).—If you can induce a branch or cutting of an Apple or Pear tree to root, it would bear fruit the same as that borne by the parent tree. Very few varieties have hitherto been so propagated.

BOUSSINGAULTIA BASELLOIDES (*H. N. L.*).—It is of the natural order *Chenopodiaceae*, and *Hexandria Monogynia* of Linnaeus. There is a plate of it in the "Botanical Magazine" for 1857, with the following remarks:—"Its native country appears to be near Loxa, in the Quitinian Andes. It is, indeed, a most desirable stove plant, growing rapidly, and bearing copious and graceful racemes of flowers, which are deliciously fragrant. Mr. Tweedie introduced it to our gardens from Buenos Ayres, and we have specimens both from the Glasgow and Glasnevin Botanic Gardens. Mr. Nicolson observes that the quantity of mucilage contained in the root is quite remarkable, and the bulk of roots produced altogether astonishing. He has one root of not less than 4 lbs. weight. At Glasnevin, indeed, it has stood the winter in the open air at the bottom of a wall." It is propagated by seed, and the division of its tuberous roots, and should be grown in peat and rich loam. Summer temperature 60° to 70°; winter, 45° to 55°.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Week ending December 17th.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 11	29.978	29.954	50	35	43	40	N.W.	.00	Overcast; overcast and damp; mild and overcast.
Thurs. 12	30.106	30.004	53	37	43	41	N.W.	.00	Very fine; overcast and mild; clear at night.
Fri. . 13	30.166	30.125	48	30	41	42	W.	.00	Clear; overcast; clear and fine.
Sat. . 14	30.066	29.702	55	43	45	42	S.W.	.06	Overcast and mild; rain; overcast at night.
Sun. . 15	29.790	29.647	53	49	47	43	N.E.	.16	Rain; heavy rain; overcast, very mild.
Mon. . 16	29.778	29.699	54	48	44	44	W.	.00	Densely overcast; overcast; rather boisterous.
Tues. . 17	29.669	29.574	54	33	47	44	W.	.04	Densely overcast; fine; overcast at night.
Mean	29.928	29.815	52.43	39.29	45.29	42.29	..	0.26	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

JUDGING POULTRY.

UNDER this head I would like to add a few remarks to those of "AN EXHIBITOR" and "DELTA," the able communication of the latter being really upon the same subject. Both correspondents touch upon admitted and growing evils.

That much of our judging is far too hurried all are agreed; but the fact does not always arise from want of time. At

Bristol Show the Judges had a whole day before them, but they had, I believe, completed their task before two o'clock, and I have no hesitation in saying, that not even such a judge as Mr. Hewitt can in that time review with proper deliberation and care 630 pens of fowls. I am inclined to think that the unnecessary haste in cases where there is time enough, may be owing to the hasty habit caused by being so often hurried on other occasions; but it should be most carefully guarded against where possible, and had more time been taken in this case, Mr. Hewitt and his partner, who know a good Dorking as well as I do, would not have committed such an error as their

second prize in Class 1, whilst a high commendation was all the award given to the Duke of Newcastle's magnificent pen.

For the larger shows, indeed, I have no hesitation in saying that two judges are not enough. Year by year entries have been increasing, but the number of judges has been retained, and the consequence is, that chicken classes especially are far more hastily and carelessly judged than formerly. Where two judges have to award prizes at a large show, I feel convinced a modification of "AN EXHIBITOR'S" idea would give far more satisfaction than the present procedure. Let the show be divided, and each judge be responsible for certain classes; he will then have more time to give to them, and the very feeling that he is so responsible, will go far to prevent such slovenly decisions as we often see. When they have gone through, let the judges exchange books, and each go through the other's classes, noting what he may think erroneous. This would not take long, and whilst each should still be responsible for his own class, any glaring errors would stand a fair chance of being rectified, since the same judge might be prepared to see differently after a few hours; but if both go round together, I need not say there is often no real discussion, but the strongest will carries the day.

"DELTA" has touched upon another real grievance with regard to the judging of cockerels. I recently showed one of the largest Brahma cockerels bred this year (at five months old the bird weighed 8 lbs.), but he was passed unnoticed on account of his "raw" appearance. I am sending the same bird to Birmingham, but although he weighs 9½ lbs. at seven months, and much of his legginess has disappeared, his hackles are not yet much more than halfway down his neck, nor is he nearly filled out in width, and I know my fate beforehand; whilst, as "DELTA" says, I have birds only five months old with their plumage fully out, but which will never make half the bird of the great ungainly-looking brute I speak of, and yet in fairness I must say, that there is more allowance made for age at Birmingham than almost any other show I know. The classes are more divided, and this year it was to be a "special instruction" to the judges to take into consideration the ages of the chickens as stated in their books. But at most shows this is not the case; and even at Bristol, an Exhibition of no mean pretensions, not the age of a single pen was given to the arbitrators!

The evils of such a careless system are manifold, but at present I will only mention one. The consequence is, that prizes as a rule will go to, and eggs and stock will be purchased from, not the breeders of necessarily the best fowls, but those who have convenience for rearing the earliest chickens—a very different matter.

It is evident that the evil alluded to grows out of the "hurry-scurry" mentioned before. The labour is great of carefully considering the ages and condition of the chickens; the judges very frequently have not the time, and sometimes not the inclination, to undertake it. They are, therefore, either compelled, or they prefer, to disclaim it altogether, and take refuge in "judging the birds as they are." Exhibitors also must take their share of the blame, for the barefaced wilful misstatements of many of them have done much to bring about the present state of things.

Yet it ought to be remedied. It may be a peculiar fancy of mine, but my idea is, that the exhibitors are the real backbone of a show, and I feel assured that in the long run, honesty towards them will be the best policy after all. Mis-statement of age may be put down by rigorous disqualification in all clear cases. The other difficulty ought to be met, if necessary, by increasing the number of judges. No less is due to them, for their duties are arduous enough already in all conscience, and not one feather would I add to the weight of an office always thankless and often painful. In no other way that I can see can this growing evil of carelessness and superficiality in judging be met; but I do say, that if committees profess to have "chicken classes," or to hold "chicken shows," they are morally bound to secure thorough, careful, and painstaking arbitration upon all the pens they gather together.

I had something to say upon another point mentioned by "DELTA," the "fluctuation of taste" in judges; but this communication, written in great haste, is already too long, and I must reserve it for another occasion.—NEMO.

THE steady increase in the number of poultry shows, the constant augmentation of new members to the ranks of exhibitors whose names figure in every list of prizes, as well as the continuance of familiar names which for years have shared in

the spoils of every contest, testify alike to the progress, as well as the popularity of the fancy, and proclaim the necessity of having everything connected with the arrangement of the shows established on a sound, fair, and practical basis. Nothing will conduce more to this desirable end than the attainment of as nearly as possible the uniform award of prizes to the best specimens according to the generally recognised standard of excellence. If this can be obtained by an extension of time allotted to the judges, few would be found, I think, to cavil at the arrangement, provided only that the time specified did not entail an unnecessary absence of the birds from their home-quarters, but surely the object would be better achieved by a division of labour amongst the judges. At most of the shows the judging is entrusted to two or more persons who seem to work in concert, which must occupy as much or more time than a scrutiny of each pen by a single person, allowing some time for the conciliation of different opinions as to merit or demerit which will occur. Whereas, if the classes were proportionately divided amongst the judges a saving of time would ensue, and the committee would be enabled to select persons who were breeders and recognised judges of the varieties submitted to them for their decision; thus a saving of time would be effected, a satisfactory award of prizes might be expected, and no "additional call would be made on the Society's coffers."

The managers having allotted to the judges their respective classes for adjudication, would do well to remind them of a stereotyped rule in every list, forbidding manipulation by the owners of specimens—viz., "That any trimming or artificial alteration, &c." At some of the late shows, especially in the Cochins classes, cocks have been exhibited with their flight feathers removed, both cocks and hens with artificially serrated combs, and tail-less, and this without remonstrance from the judges. Nay, more, they have monopolised the prizes, while the unlucky owner of a Game or Hamburg cock who has attempted the artifice, has been held in contempt, and on his birds has been executed the summary vengeance of the arbitrators. Surely both managers and committees need having their memories refreshed.—INCOGNITO.

HAVING read your note to the termination of the controversy on "French and English Gardening," I will endeavour to reply as gently as I can to "EXHIBITOR'S" last communication on this subject. In doing so I fear I must write more egotistically than I desire, but it is a matter of self-defence. I was not aware that I had ever assumed an "*ex cathedra*" tone in my communications. I have simply given my impressions; the impressions of one who, at some time or another of his life, has kept almost every breed of domestic poultry. "EXHIBITOR" appears to intimate that I considered the Clifton Judges unfair. I certainly never meant to write this. I believe both the Judges to be men of the strictest honour and integrity, and I would prefer Mr. Hewitt as Judge to any other living. I have such confidence in him that I am quite certain that had he been led to examine again his third prize White Bantam pen, for instance, he would have altered his decision. If two such Judges fell into errors, it is pardonable in "Y. B. A. Z."

"EXHIBITOR" declines my explanation of the Brown Red error. I presume I was correct about the carriage of the cock's wing, as he does not take exception to that; whilst as regards the hen, I do not think the colour "NEWMARKET" has given in the same number would describe her. Probably "EXHIBITOR" received a copy of another paper with a critical report of the Clifton Show. There the hen is described as "smoky." I presume that means dark.

After "EXHIBITOR'S" cutting up of my dottings, I have taken some trouble to find out how far my ideas of the birds at Clifton Show agreed with those of that other writer. I find, curiously enough, that almost all the pens I noticed were very similarly commented on with two striking exceptions, to which I will presently refer. Nay, more, I find that where I went out of my way to notice a pen that the Judges had not commended, this writer had done the very same, and I think I may fairly argue from this that my "dottings" were not so full of "errors" as your correspondent would seem to infer. The two pens which we appeared to see with different eyes, were, firstly, Mr. Tudman's cup Cochins. I grant that they were magnificent in size and colour, but one or two eminent Cochins breeders agreed with me as to the twisted tail of the hen; my own impression, unaltered by anything I have read about the pen, is that it was very badly so. The other pen was Mr. Beldon's Silver Polands. In reference to this pullet I can only say that Mr. Beldon's servant kindly took her out for me, and

I examined her back, and am quite certain I was correct. I think I convinced the attendant I was right. I must, therefore, now leave others to judge of the value and justice of my remarks, and apologise for occupying so much space for personal defence.

As to "EXHIBITOR'S" proposal to leave out the judging of certain classes when there is no time, &c., I feel certain he will hardly find any exhibitor to second it. My own proposition, which Mr. Hewitt kindly noticed, was intended rather to avoid great errors, and need not occupy much time. Shall I add that to Mr. Hewitt, more than any other judge, we must look for the correction of the grievous fault of wasting the time of judging by waiting "for late pens?" This is either the fault of the exhibitor or the rail. In the former case, exclusion from competition is a just punishment. In the latter case, damages might, I fancy, be obtained. At any rate it is not justice on the part of the Committee to favour one exhibitor at the expense of those who have complied with the regulations. I think all too-late pens should be so ticketed during the show. Committees owe so much to Mr. Hewitt, that I think he may fairly say he will not undertake the post unless the time is strictly adhered to.

A few words to "DELTA." Every breeder will agree with the truth and justice of his remarks, but it may be fairly said that birds deficient in an important member must, if exhibited, stand a sorry chance against those that possess the member, especially when the loss of the member may serve to hide other defects. It is quite possible that the pen I alluded to, Mr. Mapplebeck's, might have been first the week previous. The competitors might have been fewer, and other things might have influenced the decision. I greatly regretted their position at Bristol, for I thought them a most splendid pair; but perhaps that is one of my errors, and I know nothing about it.—Y. B. A. Z.

BIRMINGHAM SUMMER POULTRY SHOW.

THE success of the Show just past should suggest to the Birmingham Committee the question of a Summer Exhibition, say at the same time as the Horse and Hound Show. From conversation with some of the exhibitors, I am led to believe it would be largely and greatly patronised by them.—EXHIBITOR.

LIGHT BRAHMA POOTRAS.

I VENTURE to address you on behalf of my old and valued friends the Light Brahmas.

It seems to me to be rather hard for Light Brahmas that the silver cups offered at Shows (to both varieties) are invariably awarded to the Dark. I know an instance of a Light Brahma cock belonging to a friend of mine winning eleven first prizes, and though in most of these victories he competed for a cup, he never had one awarded to him. If the judges are determined to give the cups always to the Dark let the Committees honestly say, "the Light having no chance against the Dark; we will increase the number of prizes offered to the Light, and not put them in competition for a cup they have no chance of winning;" or, better still, let them offer a cup to both varieties.

I write thus strongly as I am an exhibitor of both varieties, and I am not aware of a single instance of the Light triumphing over the Dark.—ALBERT O. WORTHINGTON, *Newton Park, Burton-on-Trent*.

GAME COCK MUTILATED.

I FEEL confident of your sympathy and moral support in exposing a most flagrant act perpetrated upon the Black Red Game cockerel, shown in pen No. 1395, at the recent Birmingham Exhibition of poultry. The cockerel has had, previously to his being returned home, both sickle feathers cut off about 1 inch shorter than the upright tail feathers. They have been cut with a sharp knife, and by an expert hand. I judge no man, but suspect the motive must have been selfishness. To secure a better chance for the Manchester cup it was deemed expedient to place this bird—a dangerous opponent, *hors de combat*.

I ask for the sympathy of all honest exhibitors of poultry, and with their moral support I will endeavour to counteract the evil design of the base person who did, or caused to be done, this vile act. I will exhibit the bird, all being well, at the forthcoming Manchester show in his mutilated state, but otherwise with his inherent fine characteristics of an English thorough-bred Game cock still present, both in hand and out

of it, and rely with perfect confidence on the honourable feeling of the Messrs. Jennison to instruct their appointed judges of Game fowl, not to depreciate the natural fine quality of a bird they find disfigured for the present only through the wilful act of a jealous opponent.

Failure in the object intended, together with the risk of detection, is, I believe, the best method of putting a stop to such abominable practices for the future.

The bird is sufficiently well-known to all parties interested to be at once recognised as the winner of second honours both at Bristol and Birmingham this year, where his sickle feathers were perfectly sound and free from fault.—THOMAS O'GRADY, *Hogston Vicarage*.

[We fully sympathise with Mr. O'Grady, and the Birmingham Committee will do well to trace as far as they can into whose hands the bird was last passed un mutilated. We think it would not be safe for judges to award prizes to mutilated birds. It would open a wide door for the entrance of deception.—EDS.]

ASHFORD POULTRY SHOW.

DECEMBER 10TH AND 11TH.

THE entries last year were under 180, this year they were over 300; and the Show contained, besides, a large number of Pheasants, Pigeons, and specimens of useful and fancy poultry. The interest taken in the Show by the public has vastly increased, and we should think the promoters of the Show could hardly have anticipated so great a success.

The *Dorkings* were again very strong, and the merit possessed by some of them was, we should imagine, almost unsurpassable. The famed Goodnestone breed of Bridges Plumtree, Esq., and the Sandling fowls of Col. Deedes this time took first honours, and well they deserved the awards. W. Statfield, Esq., and F. W. Pittock, Esq., had also entries which were highly commended. Some of the adult *Dorking* cocks probably weighed about 13 lbs. each, and the cockerels about 9 lbs. each. The *Game* breeds were well represented, there being upwards of fifty entries in this class, and several new names appeared on the list, notably that of Mr. James Jeken, of Eltham, who gained four first prizes, and E. R. Rice, Esq., of Tilmanstone. The former gentleman exhibited some of the most exquisite types of the breed in the Black and Red-breasted varieties that we have ever seen; and the latter gentleman sent most beautiful specimens of Duck-wing Game fowl. Many of the entries in this class were highly commended, the Black-breasted chickens being noted by the Judge as particularly good. Captain Lambert's Blue and Dun Pile birds attracted much notice by the beauty of their plumage. The *Cochins* were considered by the Judge to be the best class in the show. Some of the birds were very beautiful in colour, particularly the Partridge variety exhibited by Mr. Phillips. The *Spanish* fowls were not so numerously represented as others; but the chickens exhibited by Mr. Cork, of Maidstone, were admirable types of the breed. The *Brahma Pootras* were for the most part very choice birds. The *Hamburghs* the Judge did not consider to be good, although there were thirty pens of these "everlasting layers." Mr. C. Havers, of Ingatstone, Essex, came in for three first premiums; Mr. Spice, of Keenington, taking two seconds this year; and Miss Chesshyre, of Canterbury, took a first prize for Silver *Hamburgh* chickens. Among the fancy varieties the pens of *Cree Cour, Houdan*, and *La Fleche* fowls exhibited by Colonel Stuart Wortley were particularly admired by connoisseurs. Mr. Boothby gained a first prize for a pen of Golden *Polish* fowls, and he had a pen of Silver ones which the Judge considered so good that the Committee voted them an extra prize; Mr. Kipping, of Bearstead, having taken the second. Mr. Pittock's *Polish* chickens obtained a first prize; but the White-crested ones exhibited by Mr. Ledger attracted great notice from their grotesque appearance. There was a large collection of *Bantams*, including most of the known varieties, and many were very beautiful. The pen of Silky *Bantams* exhibited by Mr. Foord, of Westwell, were much admired; their yellowish-white glossy plumage being very remarkable.

Mr. W. F. Harvey, of Chartham, exhibited some very fine *Aylesbury Ducks*, and Mr. Barnard, game-keeper, Hemsted, a pen of excellent *Painted Ducks*. W. Statfield, Esq., of Mystole, was not so successful as last year. The *Geese* were poor in quality; the *Turkeys* were placed in rather an unfortunate position and could not be seen to advantage. Among the extra poultry were two pens of a peculiar variety of the Wood Pheasant, exhibited by Sir C. Honeywood. There were also Guinea Fowls, Fancy Pheasants, and most of the known breeds of Pigeons. The following is the list of prizes:—

DORKINGS (Coloured).—First, Col. Deedes, Sandling Park. Second, B. Plumtree, Goodnestone, Wingham. Third, I. Bates, Ivychurch. Fourth, W. Statfield, Mystole, Canterbury. **CHICKENS.—**First, Second, and Third, B. Plumtree. Fourth, F. W. Pittock, Sellingle. Fifth, F. Kipping, Bearstead. Commended, E. Rice, Tilmanstone; F. W. Pittock; W. Statfield. **COCK.—**First, F. W. Pittock. Second, B. Plumtree. Commended, T. Perkins, Willesborough.

DORKING (White).—First, Rutter, Ashford. Second, H. Harms, Ashford. **CHICKENS.—**First, R. J. Andrews, Ashford. Second, Mrs. L. Brent, Buxted, near Uckfield.

SPANISH.—Prize, Lady Knatchbull, Mersham Hatch. **CHICKENS.—**First

and Second, E. Cork, Maidstone. Third, Messrs. Ashby & Curtis, Staipes, Middlesex. Commended, J. Chittenden, Mersham; Rev. F. T. Scott, Shepherdswell. *Cock*.—Prize, B. Plumtree.

COCHIN-CHINA.—First, Miss A. Christie, Gyndebourne, Lewes. Second, C. Hughes D'Aeth, Knowlton, Wingham. Third, R. Pilcher, Oaten Hill, Canterbury. *Chickens*.—First, Miss A. Christie (Buff). Second, W. W. Pyne, South Lancing, Sussex (Buff). Third, F. G. Phillips, St. Leonard's-on-Sea (Partridge). Commended, C. Hughes D'Aeth; Messrs. Ashby and Curtis (Buff); W. G. Cloke, Waltham; R. Pilcher.

BRAHMA POOTRA.—First, Lady Dering, Surrenden, Dering. Second, W. F. Harvey, Thursted, Chatham. *Chickens*.—First, Messrs. Ashby and Curtis (Dark). Second, T. G. Ledger, Folkestone. Highly Commended, W. F. Harvey; W. E. Thorpe, Smeth.

GAME (Black-breasted).—First, J. Jeken, Eltham, Kent. Second, A. Wickham, Wye. Third, R. J. Sankey, South Hill, near Ashford. Commended, C. Hammond, jun., Swarling, Petham. *Chickens*.—First, J. Jeken. Second, W. W. Pyne. Third, W. F. Harvey. Highly Commended, Lady Dering; M. Tomkin, Wittersham; Col. Deedes; R. J. Sankey.

GAME (Red-breasted).—First, J. Jeken. Second, W. W. Pyne. Third, R. J. Sankey. Highly Commended, Col. Deedes. *Chickens*.—First, J. Jeken. Second, R. J. Sankey. Third, T. G. Ledger. Highly Commended, C. Buss, Sellindge. Commended, J. Newport, Elmsted.

GAME (White, or any other variety).—First, F. Kipping. Second, R. J. Sankey. *Chickens*.—First, E. Rice (Duckwing). Second, Lord St. Vincent, Godmersham Park. Highly Commended, R. J. Sankey.

SINGLE GAME COCK.—First, E. Rice (Duckwing). Second, C. Buss. Highly Commended, H. Harms; J. Jeken. Commended, T. G. Ledger (Black-breasted-Red).

HAMBURGH (Gold-laced and Spangled).—First, C. Havers, The Beacon, Ingatstone, Essex. Second, J. Spice, Kennington. Third, Lady Knatchbull. *Chickens*.—First, C. Havers. Second, J. Spice. Third, F. W. Pittock.

HAMBURGH (Silver-laced or Spangled).—First, C. Havers. Second, Lady Knatchbull. Third, Miss Chesshyre, Canterbury. *Chickens*.—First, Miss Chesshyre. Second, J. Baldoek, Aldington. Third, J. F. Jones, Westwell. Commended, C. Havers.

POLISH.—First and Third, G. Boothby, Louth, Lincolnshire (Gold and Silver). Second, F. Kipping. Commended, F. W. Pittock (Silver). *Chickens*.—First, F. W. Pittock (Silver). Second, F. G. Ledger (White-crested). Commended, Lady Knatchbull.

ORPINGTON.—First, Col. Stuart Wortley. Second, Lady Dering. *Chickens*.—First, Mrs. Stuart Wortley, Grove End Road, London. Second, G. L. Norris, Elmsted. Commended, Lady Dering.

HORDAN.—First, Col. Stuart Wortley. Second, F. Elliott, Dymchurch. *Chickens*.—First, Mrs. Stuart Wortley. Second, Rev. F. T. Scott. Commended, F. Elliott.

LA FLÛCHE.—Prize, Col. Stuart Wortley. *Chickens*.—Prize, Mrs. Stuart Wortley.

BANTAMS (Gold-laced).—Prize, E. Rose, Ashford.

BANTAM (Silver-laced).—Prize, G. Boothby.

BANTAMS (Black, or any other variety).—First, J. Foord, Westwell (Silky). Second, G. Farmer, Pluckley. Third, Lady Dering (White). *Chickens*.—First, Lady Dering. Second, G. Farmer.

GAME BANTAMS.—First, J. Taylor, Folkestone. Second, Rev. G. Raynor, Tonbridge. Third, W. Ditz, Faversham. Commended, F. W. Pittock. *Chickens*.—First, Rev. G. Raynor. Second, R. Fowle, Wingham. Highly Commended, K. Fowle; Mrs. Kanger, Folkestone. Commended, F. G. Phillips.

DUCKS (Aylesbury).—First, W. F. Harvey. Second, Col. Deedes. Third, J. Hart. Highly Commended, C. H. D'Aeth.

DUCKS (Rouen).—First, J. Barnard, Hemsted Park. Second, W. Stutfield. Third, W. Jacob, Shepherdswell. Highly Commended, W. Jacob. Commended, W. F. Harvey.

GEESSE.—First, T. Barten, Lenham. Second, H. Andrews, Great Chart. Third, S. Pickard, Hothfield.

TURKEYS.—First, J. Foord. Second, J. Barnard. Third, W. J. Hammond, Ashford. Commended, J. Barnard; Mrs. L. Brent.

The Judge was W. B. Tegetmeier, Esq. (Ashford News.)

GUILDFORD POULTRY SHOW.

PROGRESS is the motto of the Agricultural Society in connection with which this Show is held. Like many larger shows, it is one of the forerunners of Christmas, and is in company with fat stock of every kind. It is not our province to descant on them, but we can but marvel at the facility with which the oxen carry the amount of meat and the lumps of fat that are put on them. Sheep have the same happy quality; but pigs seem more disposed to give up, and they lie, and wheeze, and pant as if they waited anxiously for the moment of violent dissolution. One thing, however, woke them up. If a metallic sound gave note there was any interference with the food trough, a succession of vigorous shakes and rolls brought them at last on their all-but-invisible legs, which slowly carried them to their meal. To note this was our amusement while we waited some time for the poultry to be penned.

Being an agricultural meeting, the wish is to encourage the breeds that can be most profitably kept, and that are best suited for money-makers in a farmyard. Three prizes were offered for *Dorkings*; two of them, and an extra prize given by Mr. Pares for the best pen of fowls in the Show, went to Mr. Clift. Twenty-three pens competed in this class, and nine of them were distinguished by the Judge. Many of them were very meritorious. We expected no less. Surrey is the home of the *Dorking*; and although the show is confined to that county, it ought to be a good one in this breed. Having stated that the first-prize pen in this class also took the first and most valuable of two special prizes offered by Mr. Pares, we would here remark we are not friendly to prizes offered for the best pen in the show. We think the breed or breeds should be indicated by the giver. There is then on difficulty; but it is seldom exhibitors are sufficiently agreed to

approve the award of such a prize to any but the class they prefer; and most of them can give account of the merits of their breeds to an extent that would justify the enumeration of all the prizes on one pen.

The *Spanish* were not numerous, but they were very good—good enough to enable the prize pens to hold their own against much greater numbers. Surrey is not now a *Cochin* county, and they are not carefully bred or shown. There were excellent *Brahmas* of both colours. It will be easily believed Mr. Pares took both prizes, and his own second with his celebrated Light birds. Out of twelve entries five were distinguished. *Game* was very good; some excellent Blacks. Among the *Hamburgs* the Golden-spangled were deservedly successful. *Bantams* brought excellent *Game* and good Silver *Selbights*. Here, as elsewhere, the Golden-laced seem dying out. French fowls are becoming known and recognised. The Variety class brought *Houdan*, *Cere d'Or*, *Breda*, and *Mar* among other novelties.

Aylesbury Ducks were again inferior in numbers and quality to the other breeds. They brought but six pens against thirteen. Mr. Burge's *Rouens* deserve especial mention. The *Geese* and *Turkeys* left nothing to desire in size, quality, or purity of breed. There were ten pens in each class. Lady Margaret Macdonald's *Geese* and Lord Lovelace's *Turkeys* were remarkable specimens.

The Show could no longer be confined to the place in which it was held last year, but rendered a large tent necessary. This was completely filled.

The prize list was given last week.

Mr. Baily, Mount Street, Grosvenor Square, was the Judge.

BARROW-IN-FURNESS POULTRY SHOW.

THE first exhibition of Poultry and Canaries at this town, which has sprung into importance with transatlantic rapidity, was held in the Market Hall on the 13th and 14th inst. For a first Show we may say it was a good one as regards the poultry classes; it was in all respects well managed, and the fowls well and carefully fed. The prizes were good, being from £1 to £2. We have not heard the pecuniary result, but we hope it was satisfactory and such as will induce the Committee to continue the Show.

In the *Game* cock class there were some very good birds: both the prize and highly commended birds might be said to be all first-class. The first-prize cock, belonging to Mr. Brough, was a splendid specimen, and the same gentleman's second-prize cock and hen were also much admired. The *Game* chickens were a good class. The class for cock and hen, Any breed of *Game*, contained fifteen entries, and all were sold by auction in the afternoon of the first day of the Show. Adult *Spanish* only mustered five pens, and young ones seven; the latter was the better class, although only a few of the pens were good; the cockerel in the first-prize pen was an excellent bird, but the pullets in the second pen were better than in the first; the cockerel, however, was inferior, his face being too short. The *Game Dorkings* were very good, the rest of the class only of moderate quality. The same may be said of the *Cochins*. The *Hamburgs* were of medium quality, but there were some very good birds amongst them, and some not so good as might have been expected. In Any distinct breed a pen of very good Silver *Polands* was first, and a good pen of *Brahmas* second. The *Game Bantams* formed a large class, there being eighteen entries, and included some very good birds.

The *Rouen Duck* class was very good, most of the pens being above the usual standard. In any other variety, *Mandarins* were first, and a beautiful pen of *Shell Ducks* second.

GAME (Any colour).—First, M. W. Stobart, Darlington. Second, J. Brough. Third, L. Casson, Ulverston. Fourth, W. B. Bultin. Highly Commended, R. Woodend, Ulverston; J. H. Wilson; M. Graham. Commended, E. Swainson; H. Martin, Ulverston; J. H. Wilson; R. Pashley, Workop. *Cock*.—First, J. Brough, Carlisle. Second, G. and C. Furness, Accrington. Third, W. Boulton, Dalton. Highly Commended, T. Robinson, Barrow; J. H. Wilson, St. Bees; J. Hodgson, Bradford. *Chickens*.—First, J. Wilson. Second, M. Graham, Kendal. Third, W. Boulton. Highly Commended, T. Robinson; E. Swainson, Nibthwaite.

SPANISH (Black).—First, J. H. Wilson. Second, W. Ripley, Ulverston. *Chickens*.—First, H. Wilkinson, Earby. Skipton. Second, J. Newton, Silsden. Leeds. Highly Commended, J. H. Wilson.

DORKINGS (Any colour).—First, R. D. Holt, Windermere. Second, Messrs. Gunson & Jefferson, Whitehaven. Highly Commended, E. Leech, Rochdale; R. D. Holt. Commended, J. H. Wilson; W. W. Rutledge, Kendal.

GAME (Black-breasted and other Reds).—First, J. H. Wilson. Second, T. Robinson. Highly Commended, W. Baldwin, Dalton. Commended, J. Poole, Barrow; J. Rawcliffe, Barrow.

GAME (Duckwings and other Greys and Blues).—First, L. Casson. Second, J. Poole.

GAME (Any other variety).—First and Second, G. & C. Furness, Accrington.

COCHIN-CHINA (Any variety).—First, C. W. Brierley, Manchester. Second, J. Pool. Commended, E. J. Schollick, Ulverston.

HAMBURGHS (Golden-pencilled).—First, H. Pickles, jun., Earby, Skipton. Second, W. J. Harker, Allerton.

HAMBURGHS (Silver-pencilled).—First, J. Smith, Earby. Second, J. Preston, Allerton. Highly Commended, W. M. Mann, Kendal; W. Wilson, Ravenstall.

HAMBURGHS (Golden-spangled).—First, H. Pickles, jun. Second, W. McMillon, Glossop, Derbyshire. Commended, T. Walker, jun., Denton; J. H. Wilson.

HAMBURGHS (Silver-spangled).—First, J. Fielding, Newchurch Man-

chester. Second, S. & R. Ashton, Mottram. Commended, H. Pickles, junr.; Bowman & Fearon, Whitehaven.
 ANY OTHER DISTINCT BREED.—First, C. W. Brerley. Second, J. Poole, Ulverston. Highly Commended, E. A. Aglionby; W. H. Heelis; C. F. Stanger, Clondalkin, near Dublin. Commended, Bowman & Fearon.
 GAME BANTAMS.—First, H. J. Nicholson. Second, Bowman & Fearon. Very Highly Commended, R. Gerrard, Chowbent. Highly Commended, M. Rodland, Strickland Gate, Kendal; J. Poole; T. Robinson; G. Maples, jun., Waverley, Liverpool; S. Sherwin, Whitehaven.
 BANTAMS (Any other variety).—First, S. & R. Ashton. Second, C. W. Brerley. Highly Commended, T. C. Harrison, Hull; N. Cook, Chowbent.
 DUCKS (White Aylesbury).—First, Bowman & Fearon. Second, E. Leech. Commended, M. Alkison, Helington, Kendal.
 DUCKS (Roman).—First, G. H. Stotts, Rochdale. Second, J. J. Waller, Kendal. Highly Commended, T. Dean, Keighley; E. Leech; T. Robinson; Gimson & Jefferson; E. J. Jones, Paton, Whitehaven. Commended, S. Sherwin.
 DUCKS (Any other variety).—First, E. Hutton, Pudsey. Second, E. Woodhouse, Hindpool. Highly Commended, C. W. Brerley. Commended, L. G. & C. Furness; W. Gradwell, jun., Barrow.
 SWEEPSTAKES (Geese).—Prize, J. Ormandy, Hindpool. Highly Commended, J. Hunt, Barrow; G. H. Stotts.
 SWEEPSTAKES (Turkeys).—Prize, T. J. Harrison, Hull. Highly Commended, J. Hunt; J. Cowman, Whitehaven.
 CANARIES (Belgian Yellow).—First Second and Third, J. Hunt, Barrow. Highly Commended, J. Paxton, Ulverston.
 CANARIES (Belgian Buff).—First, R. Williamson, Barrow. Second and Third, J. Hunt.
 CANARIES (Piebald).—First, J. Boulton, Ulverston. Second, J. Paxton. Third, J. Kellett, Barrow.
 The Judge was J. Dixon, Esq., Clayton, Bradford.

YORK POULTRY SHOW.

The eleventh annual exhibition of the Yorkshire Society was held in the Cattle Market, York, on the 10th, 11th, and 12th inst. There were upwards of 450 entries of Poultry, Pigeons, and Rabbits.

The following is the prize list:—

DORKINGS (Any colour).—First, J. White, Warlaby. Second, Mrs. Dale, Scarborough. Highly Commended, G. Pounder, Kirby Moorside. Commended, R. Smith, Norton, Malton. **CHICKENS**.—First, T. Mason, Green Hamerton. Second, J. Beldon, Gt. St. Bingley. Highly Commended, G. Woodhead, Idle, Leeds. Commended, J. Stainsby, Darlington.
SPANISH.—First, J. Thresh, Bradford. Second, H. Beldon. Highly Commended, E. Brown, Sheffield. **CHICKENS**.—First, H. Beldon. Second, J. Thresh. Highly Commended, E. Brown.
COCHIN-CHINA (Yellow or Buff).—First, H. Beldon. [Second, H. Steward, Bishopthorpe, York.
COCHIN-CHINA (Any other colour).—First, J. Bell, Thirsk. Second, G. Culver, Darlington. **CHICKENS**.—First, T. H. Parker, Hovingham, York. Second, W. Bearpark, Ainstaby Steeple, Northallerton. Highly Commended, R. Stratford, Whitby. Commended, R. Loft, Woodmansey, Beverley; H. Steward.
BARNUM POULTRY.—First, J. E. Legard, Easthorpe, Malton. Second, G. Pounder. Highly Commended, W. Whitely, Sheffield.
GAME (Black-breasted or other Red).—First, W. Boyes, Beverley. Second, J. Waton, Knaresborough. Highly Commended, G. Sutton, York. Commended, G. Pounder.
GAME (Duckwing).—First, J. Kennison, Holme-on-Spalding Moor. Second, H. M. Julian, Hull.
GAME (Any other variety).—**CHICKENS**.—First, G. Pounder. Second, F. Sales, Croyde, Bawtry. Highly Commended, T. Cleminson, Darlington. Commended, J. Watson.
HAMBURGS (Golden-pencilled).—First, H. Beldon. Second, T. Crookes, Oxtord, York. Third, F. H. Dyke, Acomb. Highly Commended, T. Elmer, Sand Hutton.
HAMBURGS (Silver-pencilled).—First, J. Walker. Second, H. Beldon. Third, G. Woodhead, Idle, Leeds.
HAMBURGS (Golden-spangled).—First, S. Burn, Whitby. Second, H. Beldon. Third, G. Holmes, Driffield. Highly Commended, J. Walker.
HAMBURGS (Silver-spangled).—First, J. Walker. Second, H. Beldon. Third, G. Holmes.
P. LER (Gold and Silver-spangled).—First, Mrs. Procter, Hull. Second, H. Beldon.
POLISH (Any other variety).—First, Mrs. Procter. Second, H. Beldon.
AN FARMYARD OF OTHER CROSS.—First, R. Loft. Second, J. Wells, West Huntington.
GAME BANTAMS (Any colour).—First, H. Jackson, Darlington. Second, F. Powell. Highly Commended, J. R. Robinson, Sunderland.
BANTAMS (Any other colour).—First, Mrs. Dale. Second, W. Daynes, Pickering.
ANY PURE BREED, NOT PREVIOUSLY CLASSED.—First, G. Hunter, Stillingale (Maltese). Second, R. Loft (Sultans). Highly Commended, E. P. Wain, Sheffield (Hudans).
TURKEYS.—First, Mrs. Dale. Second, J. Agar, Brockfield, York. Highly Commended, H. M. Erwin, Driffield. **PULTS**.—First, Miss Matthews, Driffield. Second, J. Agar. Highly Commended, W. Stabler, Heslington, York.
GREEN.—First, R. Baxter, Skipton-in-Craven. Second, Mrs. Ledgird, Poppleton, York. Commended, G. Hunter.
DUCKS (Aylesbury).—First, G. Hutton. Second, O. A. Young, Driffield. Commended, G. Robinson, Thirsk; M. Harrison, Warton, Pocklington.
DUCKS (Roman).—First, M. B. Lewin, Sutton Forest, York. Second, G. Graham, Airedale, Boroughbridge.
DUCKS (Any other variety).—First, S. Burn (East Indian). Second, H. Beldon.
SELLING CLASS.—First, H. W. Hingworth (Golden-pencilled Hamburgs). Second, W. Smith. Third, J. Kennison (Duckwings).

PIGEONS.

CARRIER (Any colour).—**Cock**.—First, J. Hawley, Bingley. Second and Highly Commended, F. Crossley, Elland. **Hen**.—First, and Commended, E. E. M. Roys, Greenhill, Rochdale. Second and Highly Commended, F. Crossley.

POUTEN (Any colour).—**Cock**.—First, F. Crossley. Second, C. Cowburn, Calls, Leeds. **Hen**.—First and Cup, F. Crossley. Second, E. Brown, Sheffield.

TUMBLEAS (Almond).—First, C. Cowburn. Second, J. Fielding, jun., Rochdale. Highly Commended, F. Key, Beverley. Commended, F. Crossley.

TUMBLEAS (Short-faced, Any other variety).—First, C. Auton, jun., York. Second, J. Marshall, Driffield. Highly Commended, T. Statters, Hull.

PANTAILS (Any colour).—First, E. Horner, Harwood. Second, G. Fletcher, Acomb Landing. Highly Commended, F. Crossley. Commended, C. Auton, jun.

TRUMPETERS (Any colour).—First and Second, E. Horner. Highly Commended, J. J. Wilson, Darlington. Commended, T. C. Taylor, Middlesbrough.

BARDS (Any colour).—First and Second, J. Gell, York. Highly Commended, J. Gell. Commended, F. Crossley.

JACOUBS (Any colour).—First and Cup, J. Hawley, Bingley. Second, E. Horner. Highly Commended, J. Thompson, Bingley. Commended, F. Key.

TURBITS (Any colour).—First, R. Wilson. Second, G. Fletcher. Commended, E. Horner.

OWLS (Any colour).—First and Second, F. Crossley. Highly Commended and Commended, J. Fielding, jun., Rochdale.

ANY OTHER NEW OR DISTINCT VARIETY.—First, H. Beldon. Second, T. Rutherford, Thirsk (Archangels). Highly Commended, T. Watson, Heworth (Frillbacks). Commended, J. Mason, Rooker Hill, Boroughbridge; R. Horner.

SELLING CLASS.—First, T. Statters. Second, E. Wilson (Croppers). Third, E. Horner. Highly Commended, H. Beldon; J. Mason. Commended, C. Cowburn; E. Wilson.

RABBITS.

LOP-EARED.—**Buck**.—First and Second, M. Millington, East Parade, Heworth. Highly Commended, G. F. Jones, Beotham, York. **Do.**.—First, W. S. Hornby, Clifton Garth, York. Second, C. Gravit, Thorne, Doncaster. Highly Commended M. Millington. Commended, G. F. Jones.

LOP-EARED (Yellow and White, or Tortoiseshell).—First, A. H. Easton, West Parade, Hull. Second, M. Millington.

LOP-EARED (Black and White, or Gray and White).—First, M. Millington. Second, W. Allison, Coney Row, Sheffield. Highly Commended, S. Hall, York.

HIMALAYAN.—First, C. Rayson, Prestwich, Manchester. Second, F. Myton, Garden Place, York. Highly Commended, J. Butler, Holdgate Road, York. Commended, J. T. Henderson, York.

DUTCH.—First, Second, Highly Commended, and Commended, W. S. Hornby, Clifton Garth, York.

ANY OTHER VARIETY.—First, A. H. Easton (Silver-Greys). Second, G. Robinson, Marygate, York (Black and White). Highly Commended, E. E. M. Roys. Commended, C. Rayson.

A prize of £1, given by G. Fowler Jones, Esq., for the best pair of Lop-Eared Rabbits, bred and exhibited by any working man residing within five miles of the city of York.—Prize, F. Stainburn. Highly Commended, J. Spenceley, York.

JUDGES.—*Poultry*.—Mr. J. O. Jolly, Green Hamerton; Mr. G. Jackson, Penley Grove Street, York. *Pigeons*.—Mr. S. Burn, East Terrace, Whitby; Mr. W. Smith, Beech Hill, Halifax. *Rabbits*.—Mr. A. Cattle, the Mount, York; Mr. R. Dobson, Holdgate Road, York; Mr. J. Oglesby, Micklegate, York.

LEEDS POULTRY SHOW.

ONE of the largest shows ever held in Yorkshire took place at Leeds on the 14th, 16th, and 17th inst. About 600 pens of Poultry and Pigeons were entered, and had it not been for the Manchester Show commencing the day after this closed, thus rendering the transfer of birds impracticable, this number would doubtless have been exceeded.

GAME mustered in good force, no less than 120 pens competing for the prizes offered. In the Single Cock class Mr. Aykroyd, Bradford, took both first and second prizes, leaving the fine pens of Mr. Fletcher and the Rev. W. J. Mellor nowhere. In Blacks and other Reds, however, Mr. Fletcher came to the front, while the cup for the best pen of Game went to Mr. Noble, Halifax, for chickens. The fowl that essentially belong to Yorkshire and Lancashire, *Hamburgs*, was well represented. In Silver-spangled, Messrs. Robinson & Fawcett, Baildon, had a splendid pen of chickens, the cockerel being one of the most perfect specimens we ever saw, bars, deaf ears, comb, and hackle were perfection. We need hardly mention that this pen carried off the cup for Hamburgs. In Golden-spangled Mr. Beldon still retained his place, taking the first prize for adult birds and the second prize for chickens; while in the Pencilled varieties he took the lead, being first for adult Silver-pencilled and first for chickens, as well as first for Golden-pencilled chickens. Black Hamburgs were almost as strong at Leeds as at Birmingham. For chickens, Mr. Beldon was first, while the second prize went to Mr. Holt, Middleton. Strange to say a magnificent pen belonging to Mr. Sidgwick, Keighley, whose pullet was first at Birmingham, was unnoticed—a fact which we can only account for by their being placed too high to be seen to advantage.

In birds exceeding a year old, Mr. Green, of Keighley, showed some excellent hens, but owing to the cock being out of condition, he only took second. *Dorkings* were a very fair show; the cup went to Northallerton. *Spanish* kept their ground. The *Hen*. Miss Pennant was again foremost, taking the silver cup for chickens. *Cochins* exceeded former years, Col. Stuart Wortley winning the cup for adult birds, and Mr. Taylor being first for chickens in the Cinnamon and Buff class, while Mr. Sidgwick distanced all competitors in the Any variety class. There were a few good pens of *Poldans* shown, but with Mr. Beldon in the field, his rivals stood no chance.

In Ducks the Rouen far eclipsed the Aylesbury, both in numbers and quality.

Bantams were exceedingly numerous, no less than fifty-five pens of Game being entered, a fact which may possibly suggest to the Committee the advisability of either dividing the class or increasing the prizes. Mr. Entwistle took the cup for Game, while the Blacks took the cup for the best pen of Bantams.

SINGLE GAME COCK (Any description).—First and Second, E. Aykroyd, Bradford. Third, W. Spencer, Haworth.

GAME (Black-breasted and other Reds).—First and Third, E. Aykroyd. Second, R. Pashley, Workop. *Chickens*.—First, E. Noble, Halifax. Second, J. Spencer, Halifax. Third, J. Fletcher.

GAME (White and Piles).—First, R. Pashley. Second and Third, R. Butcher, Chesterfield. *Chickens*.—First, R. Butcher. Second, J. Fletcher. Third, W. Walker, Gomersal.

GAME (Any other variety).—First, H. Jowitt, Shipley. Second, A. K. Briggs, Bradford. Third, T. Wilcock, Morley. *Chickens*.—First, R. E. Riley, Halifax. Second, J. Hodgson, Bradford. Third, W. Boyes, Beverley.

DORRINGS (Silver-Grey).—*Chickens*.—First and Second, J. Stott, Rochdale. Third, J. Codd, Shipley.

DORRINGS (Any other variety).—Cup and First, J. White, Northallerton. Second, H. Beldon, Eingley. Third, W. Charter, Driffield. *Chickens*.—First, T. Rogers, St. Helens. Second, H. Beldon. Third, E. Shaw, Oswestry.

SPANISH.—First, Miss York, Wighill Park, Tadcaster. Second, Hon. Miss Douglas Pennant, Penrhyn Castle, Bangor. Third, J. Thresh, Bradford. *Chickens*.—Cup and First, Hon. Miss Douglas Pennant. Second, J. Newton, Silsden. Third, H. Beldon.

COCHIN-CHINA (Cinnamon and Buff).—First, Col. Stuart Wortley, Grove End Road, London. Second, R. White. Third, H. Beldon. *Chickens*.—First, W. A. Taylor. Second, Col. Stuart Wortley. Third, J. H. Dawes, Birmingham.

COCHIN-CHINA (Any other variety).—First, J. S. Senior. Second, T. M. Derry. *Chickens*.—First, C. Sidgwick, Keighley. Second, W. A. Taylor. Third, J. Horrocks, Middleton.

HAMBURGS (Golden-pencilled).—First, H. Pickles, jun., Skipton. Second, S. Smith, Northorham. Third, F. Hollings. *Chickens*.—First, H. Beldon. Second, J. R. Jessop, Hull.

HAMBURGS (Silver-pencilled).—First, H. Beldon. Second, H. Pickles, jun. Third, W. & J. Bairstow. *Chickens*.—First, H. Beldon. Second, H. Smith. Third, W. & J. Bairstow.

HAMBURGS (Gold-spangled).—First, H. Beldon. Second, J. White. Third, T. C. & E. Newbitt. *Chickens*.—First, J. Walker. Second, H. Beldon. Third, J. White.

HAMBURGS (Silver-spangled).—First, Messrs. Robinson & Fawcett, Baildon. Second, H. Beldon. Third, J. Ogden, Keighley. *Chickens*.—Cup and First, Messrs. Robinson & Fawcett. Second, H. Beldon. Third, J. Walker.

HAMBURGS (Black).—First, J. Clegg, jun. Second, W. Green, Keighley. *Chickens*.—First, H. Beldon. Second, J. Holt. Third, J. Smith.

POLANDS (Any variety).—First and second, H. Beldon. Third, H. Gornall, Farley, Leeds. *Chickens*.—First, H. Beldon. Second, H. Gornall. Third, E. Proctor, Hull.

FARMYARD CROSS (Or any other variety not previously classed).—First, Col. Stuart Wortley (French). Second, R. White, Sheffield. Third, R. Loft, Woodmansey (Sultans).

TURKEYS.—First, H. Merkill, Driffield. Second, Rev. W. J. Mellor, Colwick Rectory, Notts. Third, E. Leech, Rochdale.

GEESSE (White).—First, R. Bentley, Funningley Park, Bawtry. Second, O. A. Young, Driffield. Third, E. Leech.

GEESSE (Grey and Mottled).—First, E. Leech. Second, S. H. Stott, Quarry Hill, Rochdale. Third, J. White, Whiteley, Wakefield.

DUCKS (Aylesbury).—First, E. Leech. Second and Third, M. L. Rawson, Yeading.

DUCKS (Rouen).—First, J. White. Second, T. Houliker, Blackburn. Third, C. Sidgwick.

DUCKS (Any other variety).—First and Second, J. Dixon, Bradford. Third, E. Hutton, Pudsey.

SELLING CLASS.—First, C. Sidgwick (Cochins). Second, W. Johnson, Idle. Third, W. & F. Pickard, Thorne (Polands).

BANTAMS (Black).—Cup and First, T. J. Chariton, Bradford. Second, W. A. Taylor. Third, J. R. Jessop.

BANTAMS (White).—First, S. & T. Ashton, Mottram. Second, J. R. Jessop. Third, W. A. Taylor.

GAME BANTAMS.—Cup and First, W. T. Entwistle, Leeds. Second, W. Newcome, Holbeck. Third, J. Crosland, jun., Wakefield.

BANTAMS (Any other variety).—First, W. J. Cope, Barnsley (Pekin). Second, J. J. Cousins, Leeds. Third, G. W. Boothby, Louth (Sebright).

PIGEONS.

CARRIERS.—First, F. Crossley, Elland, Halifax. Second, J. Bell, New-castle-on-Tyne.

POUTERS.—First, F. Crossley. Second, C. Bulpin, Bridgewater.

TUMBLEURS (Short-faced).—Cup and First, C. Cowburn. Second, F. Crossley.

TUMBLERS (Any other variety).—First, J. Fielding, jun., Rochdale. Second, J. Lister, Keighley.

OWLS.—First, F. Crossley. Second, J. Fielding, jun.

FANTAILS.—First, E. Horner, Harewood. Second, W. R. Park, Melrose.

BARBS.—First, J. Firth, jun., Dewsbury. Second, Rev. W. J. Mellor.

TURBETS.—First, J. Thompson. Second, T. C. Marshall, Peterborough.

JACOBIENS.—First, R. Thompson. Second, C. Bulpin.

TRUMPETERS.—First, J. Firth. Second, E. Horner.

NUNS.—First, H. Beldon. Second, R. Patterson, Melrose.

DRAGONS.—First, F. Crossley. Second, E. Horner.

ANTWERPS.—First, J. Crosland, jun. Second, R. H. Artindale.

MAGPIES.—First, C. Bulpin. Second, E. Horner.

ANY OTHER VARIETY.—First, G. W. Brown. Second, H. Yardley, Birmingham.

RABBITS.

LONGEST-EARED.—First, W. Allison, Sheffield. Second, W. Newsome, Holbeck.

YELLOW AND WHITE, AND TORTOISESHELL.—Medal, First, and Second, H. M. Maynard, Ryde, Isle of Wight.

BLACK AND WHITE.—First, G. F. Jones, York. Second, W. Allison, Sheffield.

SELF-COLOURED.—First, C. Gravel, jun., Thorne. Second, W. S. Hornby, York.

GREY AND WHITE.—First, W. Newsome. Second, W. H. Webb, jun., Bilston.

The Judges were Mr. Teelay, and Mr. Conyers, Leeds, (Mr. Hewitt being unavoidably absent) for *Poultry*; and Mr. Tegetmeier for *Pigeons*.

DORKING POULTRY SHOW.

On the 12th inst., the Dorking Poultry Society had its annual Show, and the exhibition was a most successful one. It was held in the assembly room of the Red Lion Hotel, the most convenient and suitable place that could have been selected. The weather was agreeable, and this, coupled with the extensive character of the display, secured a large number of visitors. Although not specifically announced, yet the Society's chief object is to encourage and develop the breeding of the several varieties of Dorking poultry, and this it bids fair to be influentially successful in. The Society is, of course, mainly local, but nevertheless it presented prizes (the most valuable) open to all England; and as the Society becomes more known, this fact, in addition to the attraction of exhibiting the Dorking breed in what is commonly looked upon as its native place, and from which it derives its name, must secure it many others beside local exhibitors. The general arrangements of the Show were very carefully carried out, but there was no catalogue.

In all there were 107 pens, giving nearly 330 birds in the exhibition. The class of coloured Dorkings was the largest, but there were thirteen pens of Blue Speckled, and twelve of the White variety. The birds shown were in nearly every case in good condition, and many were remarkably fine specimens of their varieties. The birds which took the first prizes in the open classes, belonging to D. C. Campbell, Esq., M.D., drew forth warm encomiums. The male bird in the first pen took the prize at the Brighton Show in the early summer, at that at Oakley lately, as well as at several of the great provincial exhibitions. A statement appears to have gone abroad that the birds to which we are particularly alluding formed part of the fine breed lately belonging to Lady Holmesdale, but we are assured that, although Dr. Campbell was a purchaser of several of her Ladyship's best birds, those which have been successful here and elsewhere are Dr. Campbell's own breeding.

DORRINGS (Coloured).—First, D. C. Campbell, M.D., County Asylum, Brentwood. Second, C. Cork, Third, Lieut-Col. Lane. *Chickens*.—First, D. C. Campbell, M.D. Second, J. Clift. Third, Lieut-Col. Lane.

LOCAL PRIZES.

DORRINGS (Coloured).—First, J. Ivimy. Second, J. Ivimy. Third, M. Putney. Highly Commended, E. T. Bennett; J. Clift. Commended, A. K. Barclay. *Chickens*.—First, J. Clift. Second, J. Ivimy. Third, J. Ivimy. Highly Commended, W. Nell. Commended, T. Cox; J. Ivimy.

DORRINGS (Blue Speckled).—First, T. Cox. Second, T. Wells. *Chickens*.—First, W. Griffin. Second, T. Wells. Highly Commended, W. Griffin.

DORRINGS (White).—First, Messrs. J. & W. Attlee. Second, Mrs. Burt. *Chickens*.—First, T. Sherlock. Second, A. Way. Highly Commended, C. Maw; T. Sherlock. Commended, Messrs. J. & W. Attlee; Mrs. Matheson.

DUCKS (White Aylesbury).—First, J. Ivimy. Second, Sir R. A. Glass. Highly Commended, Messrs. J. & W. Attlee. Commended, E. T. Bennett; A. Way.

DUCKS (Any breed).—First, — Winter. Second, M. Sutney. *GEESSE*.—First, J. & W. Attlee. Second, Miss Matthew.

TURKEYS.—First, A. K. Barclay. Second, A. Way. Highly Commended, Miss Matthew.

[Two competitors, Mr. Griffin, in the class for Blue Speckled Dorking chickens, and Mr. T. Sherlock in that for White Dorking chickens would have taken the First and Second prizes but for the rule against an exhibitor gaining two prizes in any one class.]

The troublesome business connected with the undertaking was transacted with energy and ability by the Secretary, Mr. Butcher; and the duties of Judge were efficiently and impartially discharged by Mr. John Wood, of Westcott. — (*Survey Advertiser*).

EDINBURGH POULTRY SHOW.

This took place on the 13th and 14th inst. The following is the prize list:—

SPANISH.—First, A. Ridpath, Gilmore Place. Second, W. Patterson, Langholm. *Chickens*.—First, A. Ridpath. Second, R. Sommerville, Edinburgh.

DORRINGS (Coloured).—First, J. Allan, Griefrechter. Second, D. Gellatly, Meigle. *Chickens*.—First, J. Anderson, Ruthven. Second, T. Raine, Bridgebaugh. Highly Commended, Hon. Miss de Flabault, Tulliallan. Commended, Mrs. A. Tod, Laurel Bank.

DORRINGS (Silver).—First, Duke of Buccleuch. Second, Sir J. D. Wauchope. *Chickens*.—First, Duke of Buccleuch. Second, Lady G. Montgomerie. Highly Commended, Lady Montgomerie; Duke of Buccleuch; Sir J. D. Wauchope.

COCHIN-CHINA (Any variety).—First, W. R. Park, Abbots Meadow, Melrose. Second, Sir J. D. Wauchope. *Chickens*.—First and Second, W. Ford, Hardengreen. Highly Commended, W. R. Park.

BRAHMA POOTRA.—First, K. Jopp, Aberdeen. Second, T. Raine. *Chickens*.—First, J. Anderson, Ruthven House. Second, W. R. Park.

GAME (Any variety).—First, J. Anderson. Second, D. Hardie, Sorbie

Ewes, Langholm. *Chickens*.—First and Second, J. Anderson. Commended, H. Goodall, Lyon House, Kirkcaldy.

HAMBOURS (Silver-spangled or Pencilled).—First, W. R. Park. Second, J. Hamilton, Paisley.

HAMBOURS (Golden-spangled or Pencilled).—First, J. F. Lovesidge, Newark, Notts. Second, W. R. Park.

GAME BANTAMS.—First, J. Anderson. Second, W. Hodgson, Darlington.

GAME BANTAMS (Any other variety).—First, D. Ainslie, Costerton. Second, T. Watson, Lawers House, Crief. Commended, D. Ainslie.

GREEN (Any variety).—First and Commended, Duke of Buccleuch. Second, E. Douglas, Tefferhill. Highly Commended, W. Ford, Harrogate.

DUCKS (Aylesbury).—First, J. Anderson. Second, A. Robertson, Kilmarnock.

DUCKS (Rouen).—First and Second, J. Anderson.

DUCKS (Any other Distinct Breed).—First, Miss de Flahault. Second, J. Anderson.

TURKEYS (Norfolk).—First, A. Stenhouse. Second, J. Wilson.

TURKEYS (Cambridge).—First, J. Smith, Grantham. Second, J. Menzies, Kincardine.

TURKEYS (Any other Distinct Breed).—First, W. R. Park. Second, G. W. Boothby, Holme Cottage.

SPECIAL PRIZES.

Club (Any Breed).—J. Anderson. *Chickens*.—T. Raines. Highland Society.—Pen of Fowls.—A. Ridpath. Highland Society.—Pair of Fowls.—J. Anderson. A. Dowell.—Cock, Hen, Turkey Cock, Turkey Hen.—J. Anderson, A. Ridpath, J. Smith, A. Stenhouse.

NORTH BRITISH COLUMBIAN SOCIETY'S SHOW.

This was held at Glasgow on the 12th and 13th inst. The number of entries was 518, being many more in number than at any of its predecessors. All the specimens were good, and some were very superior. We shall give a detailed report next week.

EXTRA PRIZES.

Members' Challenge Cup (value £30), presented by the Society to the most successful Exhibitor in 1866, 67, and 68.—Gained in 1867 by R. Fulton, Deptford.

An Oil-painted Portrait of the most perfect Pair of Barbs in the Exhibition, presented by the Society.—Capt. H. Heaton, Manchester.

A Silver Medal, presented by William Volekman, Esq., as a Special Prize, for excellence of form and carriage, open to all the White, Black, Blue, Red, and Yellow Pied cock Pouters in the Show, irrespective of age, but of good shape and carriage, and of not less measurement than 15½ inches in limb.—G. Ure.

A Silver Medal, presented by William Volekman, Esq., as a Special Prize for excellence of colour and markings, open to all the Black, Blue, Red, and Yellow Pied cock Pouters in the Show, irrespective of age, but of good shape and carriage, and of not less measurement than 15½ inches in limb.—G. Ure.

A Silver Medal, presented by James Grant, Esq., for the best Pouter Hen in the Exhibition.—J. Huie.

A Silver Medal, presented by James Muir, Esq., for the best pair of Black Pied Pouters, bred in 1867; Second Prize given by a Member.—First, J. Macfarlane, Glasgow. Second, W. Lightbody, Glasgow. Very Highly Commended, W. Lightbody. Highly Commended, D. Gordon, Glasgow.

A Silver Medal, presented by M. Sanderson, Esq., for the best pair of White Pouters, bred in 1867; Second Prize given by a Member.—First, G. Ure, Dundee. Second, J. Grant, Corstorphine. Very Highly Commended, J. Montgomery, Belfast. Highly Commended, F. Keir, Edinburgh. Commended, A. B. Boyd, Edinburgh.

A Silver Medal, presented by John Geddes, jun., Esq., for the best pair of Blue Pied Pouters, bred in 1867; Second Prize given by a Member.—First, D. Gordon. Second, R. Fulton, Deptford. Very Highly Commended, A. B. Boyd. Highly Commended, J. Montgomery. Commended, G. Ure.

A Silver Medal, presented by James A. Thomson, Esq., for the best pair of Red Pied Pouters, bred in 1867; Second Prize given by a Member.—First, R. Fulton. Second, J. Huie, Glasgow. Very Highly Commended, R. Fulton. Highly Commended, G. Ure. Commended, J. Macfarlane.

A Silver Medal, presented by Joseph H. Frame, Esq., for the best pair of Yellow Pied Pouters, bred in 1867; Second Prize given by a Member.—First, R. Fulton. Second, G. Ure. Very Highly Commended, G. Ure. Highly Commended, G. Ure. Commended, R. Fulton.

A Silver Medal, presented by a Friend, for the best pair of Mealy Barred Pied Pouters, bred in 1867; Second Prize given by a Member.—First, M. Stuart. Second, G. Ure.

CLASS PRIZES GIVEN BY THE SOCIETY.

POUTERS (Black).—*Cocks*.—First and Third, J. Huie. Second, R. Fulton. Highly Commended, J. Montgomery. Commended, J. R. Adams, Ayr. *Hens*.—First, R. Fulton. Second and Third, J. Montgomery. Highly Commended, J. Montgomery. Commended, R. Fulton.

POUTERS (White).—*Cocks*.—First, R. Fulton. Second, J. Huie. Third, J. Montgomery. Highly Commended and Commended, R. Fulton. *Hens*.—First, J. Huie. Second, W. Volekman, Bishopsgate Street, London. Third, J. Sharp, Johnstone. Highly Commended, J. Grant, Corstorphine. Commended, A. H. Stewart, Birmingham.

POUTERS (Blue).—*Cocks*.—First, G. Ure. Second, W. Volekman. Third, J. Montgomery. Highly Commended, G. Ure. Commended, R. Fulton. *Hens*.—First, A. B. Boyd. Second, J. Montgomery. Third, W. Volekman. Highly Commended, R. Fulton. Commended, J. Huie.

POUTERS (Red).—*Cocks*.—First, Second, Third, Highly Commended, and Commended, J. Montgomery. *Hens*.—First, W. Volekman. Second, D. Stewart, Perth. Third, R. Fulton. Highly Commended, G. Ure. Commended, J. Montgomery.

POUTERS (Yellow).—*Cocks*.—First, A. B. Boyd. Second, G. Ure. Third, R. Fulton. Highly Commended, W. Volekman. Commended, J. Montgomery. *Hens*.—First, A. H. Stewart, Birmingham. Second, J. Ruthven, Glasgow. Third, Highly Commended, and Commended, J. Montgomery.

POUTERS (Mealy Barred).—*Cocks*.—First, Second, and Commended, J. Montgomery. Third, J. Wallace, Glasgow. Highly Commended, W. Volekman. *Hens*.—First, W. Volekman. Second, J. Grant. Third, J. Huie. Highly Commended, J. Montgomery. Commended, W. Lightbody.

POUTERS (Any other markings).—*Cocks*.—First, J. Montgomery. Second, F. Keir, Edinburgh. Third, J. Muir, Glasgow. Highly Commended, W. Moon, Edinburgh. Commended, W. Volekman. *Hens*.—First, R. Fulton. Second, J. Grant. Third, G. White, Paisley. Highly Commended, R. Fulton. Commended, W. R. Rose, Kettering.

CARRIERS (Black).—*Cocks*.—First, Second, and Highly Commended, R. Fulton. Third, J. Ruthven, Glasgow. Commended, G. Ure. *Hens*.—First and Second, R. Fulton. Third, E. Horner, Leeds. Highly Commended, J. Ruthven. Commended, E. E. M. Roys, Rochdale.

CARRIERS (Dun).—*Cocks*.—First, R. Fulton. Second, T. Colley, Sheffield. Third, G. Ure. Highly Commended, J. Montgomery. Commended, Capt. Mangnail. *Hens*.—First, Second, and Third, R. Fulton. Highly Commended, T. Colley. Commended, F. Else.

CARRIERS (Black and Dun excepted).—First, R. Fulton. Second, J. C. Ord. Third, T. Colley. Highly Commended, T. Colley. Commended, J. C. Ord.

TUMBLERS (Almond, Short-faced).—First and Second, R. Fulton. Third, J. Wallace. Highly Commended, J. Ford. Commended, R. Fulton.

TUMBLERS (Mottles, Agates, Kites, or Self-Colours).—First, Second, and Third, R. Fulton. Highly Commended, A. H. Stewart, Birmingham. Commended, G. White, Paisley.

BARDS.—*Adult*.—First and portrait, Capt. H. Heaton. Second, MacLure and Redford, Manchester. Third, F. T. Wiltshire, Croydon. Highly Commended, Capt. H. Heaton. Commended, P. H. Jones.

FANTAILS.—A Silver Medal presented by James Ruthven, Esq., Glasgow, J. Smellie, Wishaw. Second, J. E. Spence, Mussolburgh. Third, J. Hawley, Bingley. Highly Commended, E. Horner, Leeds. Commended, M. Clelland, Cambusnethan.

JACOBS.—A Silver Medal presented by George Ure, Esq., Dundee, and Third, E. Horner, Leeds. Second, J. R. Rennards, Helensburgh. Highly Commended, L. Glassey, Rochdale. Commended, J. Hawley, Bingley.

TRUMPETERS (Mottled or Black).—A Silver Medal presented by John Stuart, Esq., Glasgow, and Third, J. Montgomery, Belfast. Second and Highly Commended, E. Horner, Leeds. Commended, A. B. Boyd.

TRUMPETERS (White).—A Silver Medal, presented by A. B. Boyd, Esq., Edinburgh, C. Bulpin, Bridgewater. Second, E. Horner. Third, W. H. C. Oates, Newark. Highly Commended, A. B. Boyd.

TURBOTS.—A Silver Medal, presented by J. R. Rennards, Esq., Helensburgh, J. Fielding, jun., Rochdale. Second, J. R. Rennards. Third, P. H. Jones. Highly Commended, E. Horner. Commended, W. R. Park.

OWLS (Foreign).—First, R. Fulton. Second, J. Fielding, jun. Third, J. Montgomery. Highly Commended, J. Fielding, jun. Commended, E. Horner.

OWLS (Not foreign).—First, W. R. Park. Second, C. Bulpin. Third, J. Bell, Newcastle. Highly Commended, J. Sharp, Johnstone. Commended, C. Bulpin.

NUNS.—First, C. Bulpin. Second and Third, E. Horner. Highly Commended, R. Paterson. Commended, J. Sharp.

BEARDS, BALDS, AND COMMON TUMBLERS.—First, J. Sharpe. Second, J. Percival. Third, J. Ford. Highly Commended, R. Fulton.

DRAGONS.—First, J. Percival. Second and Third, R. Fulton. Highly Commended, E. Horner. Commended, P. H. Jones.

ANY OTHER VARIETY.—First, J. Montgomery. Second, A. H. Stewart, Birmingham. Third, A. B. Boyd. Highly Commended, J. Wallace, Glasgow. Commended, J. Montgomery.

EXTRA CLASSES.

CARRIERS (Black).—*Young*.—A Silver Medal, presented by James Wallace, Esq., Glasgow, G. C. Holt, Lawton, Cheshire. Second Prize, given by a Member, J. Montgomery. Third, R. Fulton. Highly Commended, F. Else. Commended, J. Ruthven.

CARRIERS (Dun).—*Young*.—A Silver Medal, presented by C. M. Roys, Esq., Rochdale, G. C. Holt, Lawton, Cheshire. Second, F. Else, London. Third, G. Ure.

CARRIERS (Black and Duns excepted).—*Young*.—First, J. C. Ord, London (Blues). Second, T. Colley.

TUMBLERS (Short-faced).—*Young*.—A Silver Medal, presented by Wm. N. Clark, Esq., Glasgow, and Third, R. Fulton. Second Prize, given by a Member, J. Ford. Highly Commended, J. Wallace. Commended, J. Hawley, Bingley.

BARDS.—*Young*.—A Silver Medal presented by Matthew Stuart, Esq., Capt. H. Heaton, Manchester. Second, given by a member, and Third, J. H. Frame. Highly Commended, P. H. Jones, London. Commended, E. Horner, Leeds.

The Judges were T. J. Charlton, Esq., of Bradford, and E. L. Corker, Esq., of Croydon.

SILVER-GREY DORKINGS.

I CAN, as far as my experience goes, confirm what the Rev. T. O'Grady states in the Journal of December 12th. I have bred Silver-Grey Dorkings for nine years, and in no single instance have had a bird hatched not true. All depends on what one breeds from; if the stock is not pure you cannot expect pure birds, as many in seeking for extra size used coloured birds to cross with. The fowls first produced from such a cross are generally good-looking Silver birds, but in the next generation comes the stain. I am convinced by numerous trials that if one breeds from birds that are pure Silver-Grey Dorkings they will not produce a single bird not like their parents.

At some of the shows in the South of Ireland there is no class for Silver-Greys, but I may safely state that the Silver-Grey have always beaten the Coloured birds. I have on several

occasions shown birds bred by Mr. O'Grady, and in no instance were they beaten.—A. E. U.

BEEES IN NORTH LINCOLNSHIRE.

I HAVE been waiting to see the results of the past season stated by your various contributors. From what I have seen and heard it seems to have been, taken as a whole, one of the worst bee seasons that has occurred in England for several years, with the exception, perhaps, of the heath districts. My own experience confirms this, although I have had three good supers this year. Before I describe them I must say that my readers must bear in mind that they were in two instances worked by exceptional stocks, and by an exceptional queen in the third. A protracted and severe winter was followed by a lengthened and cold spring, severe frosts and snow continuing up to the 25th of May, at which time none of my stocks was as populous as I have had them at the same date in April. Strong stocks which were left last autumn, over 50 lbs. gross weight, were starving in the first and second weeks of June, whilst two were broken up about that time to make their combs serviceable in other ways.

Matters standing thus, I decided to super only three of my best stocks. Two of these were Stewartons—Nos. 2 and 14—with seven-bar framed 14-inch square supers, the bars 2 inches apart, with guides and waxed bars. These two stocks were the same as mentioned in "our Journal" of December 11th, 1866. They made similar progress, work not being begun in the supers until the end of June; but from thence to the 14th of July honey was abundant, and those stocks that were of sufficient strength gathered a large quantity. The two Stewartons kept equal pace with each other; by the latter date both were full, and by the 26th were sealed and taken off, the nett weight of No. 2 being 42 lbs. of pure honeycomb, and that of No. 14, a square glass mahogany one, 43 lbs. of beautiful straight combs, all perfectly sealed—indeed, it is the best super I ever had the good fortune to have, and this in one of the worst of bee seasons.

The other supered stock was No. 3, a ten-framed Woodbury hive, to which last autumn was given a hybridised queen. This stock in the spring was one of my strongest, so I made an artificial swarm from it in the last week of May for the purpose of inserting in it spare royal cells. It was then supered with the others. Work commenced on the same day as in the others, and progressed equally until the 11th of July when, inspecting the super on that morning, I noticed several bees with wax scales protruding from their abdomens, and thought—What do they want with wax now that their super is full, and only requires sealing over? I left home for a few hours, and on my return this stock had swarmed and alighted on a berry bush, which it completely covered. Sweeping the greater part into a straw hive, I found them of the almost incredible weight of near 9 lbs. Scarcely satisfied, I examined all my stocks of bees likely and unlikely to swarm, and found that none had done so except this one. I then carefully weighed a Woodbury hive, and let the bees run into it. In the course of half an hour they were settled, and I then found their exact weight to be 8 lbs. 12 ozs. The largest swarm I had previously ever had was, I believe, about 6 lbs. In a fortnight's time they seemed as numerous as before, and finished the super by the end of the month. Its nett weight was 28 lbs. They then had the courage to swarm again on the 31st, twenty days after the issue of the first swarm, leaving one of those queens spoken of by the "LANARKSHIRE BEE-KEEPER" a few weeks ago. Her appearance was that of a worker, except having longer legs. I removed her, and gave them a pure young Ligurian queen, artificially raised in June.

From the above it will be seen that I obtained 113 lbs. of super honey from three stocks and two swarms. In addition to this, through reducing my apiary to seven stocks during the past autumn, I obtained upwards of 100 lbs. of run honey from over one dozen stocks, which I was compelled to destroy, and of which one alone, an eleven-frame hive, yielded me 50 lbs. of honey. The rest yielded only as much collectively as that mentioned. It was a strong stock last autumn; but it never swarmed, and by the end of August was full of honey throughout, but with scarcely any brood.

In addition to the two swarms mentioned above, I had another from a black stock on June 23rd, and one from a Ligurian, after much manipulating, on the 14th of July.

My stocks for the winter are fairly provisioned, but weak in

bees. The honey season lasted up to the 25th of August; but that gathered so late in the season is always stored in the centre combs, where the brood is hatching. Whether this has come under the notice of others or not I cannot say; but I know that I have before observed it in the apiary of—J. B., Bracken Hill.

P.S.—I may state that I have heard of no supers being taken near here above 10 lbs. in weight this season, nor many even of these.

FOOD FOR SILKWORMS.

HAVING a few years ago kept a number of silkworms, which did remarkably well, and reading an article in the number for December 5th on the cultivation of the silkworm in England, and the best kind of food, I write to say, that having purchased some of the white mulberry trees, I found they stood the hardest winter, and in a few years became very large trees; in fact, much too large for the space allotted them, and were ultimately cut down. I found the worms preferred the white mulberry to any other kind of food.—C. L., Warrington.

OUR LETTER BOX.

COME OF SILVER-SPANGLED HAMBURGH COCK (*Norland Baron*).—We cannot speak as to the number of points that would be forfeited by the defects you mention, not being up in them. In any ordinary competition the defective comb would at once throw your cock out of all hope of distinction. It is almost a disqualification.

PLUMAGE OF LIGHT BRAHMA POOTRAS (*Idem*).—Light Brahmas should be white, save a striped hackle, black flight, and black tail. Wash your fowls by wiping the outside of the feather with soap and water put on a piece of flannel, dry them as nearly as may be, and then put them near, but not close to a fire, in a basket with soft oat straw till they are dry.

DARK BRAHMA POOTRA COCK (*Doubtful*).—We should not mind the twisted toe. When you say he has some dark yellowish feathers where the silvery white should be, you are not sufficiently explicit. We presume they are on the wing. If so they are a common occurrence; many have them. We should prefer breeding from a bird without them; but we should hesitate before we discarded as good a bird as you describe.

BLACK DUCKS (*F. S.*).—Labrador, Buenos Ayrean, and Black East Indian Ducks are identical. They do not pair, and even if you get another Duck you must put away one drake. They will not only fight, but it is very likely they will spoil your breeding season.

FOOD FOR SWANS (*Cygnets*).—Barley and oats are the best food. When Swans will not feed, they require the corn and some meal put in a shallow vessel, with sods of grass and gravel; they will eat that. They want very little care. (*Ere*).—You must feed your Swans on oats and refuse green vegetables. They will want little of the former if well supplied with the latter.

YOUNG EXHIBITORS (*G. R. S.*).—We can easily enter into the feelings of young exhibitors when they are anxious to see their names in print among the most successful. We are careful to print the prize list with high and ordinary commendations in its full extent, and every name figures there. This is especially true of the Game. It must be understood when we speak in terms of commendation of a certain breed, it includes cocks, hens, and pullets, but if we named all worthy of distinction, our report would be a simple repetition of the prize list.

HOUSES FOR DARK BRAHMAS (*Z. L.*).—You require no straw for the bottom of your house, even during the hardest weather. Of three daily meals, two should be soft food. The midday repast should be whole corn. They require no artificial heat. If you send us your letter to "NEMO" in a stamped envelope we will forward it.

PROTECTING BEES IN WINTER (*Norland*).—The winter in England is not so severe as to render it necessary or even advisable to remove bees from their summer stands. If, however, it is done, the same precautions should be taken for their well-doing as are adopted in more inclement regions, where they are placed in apartments from which every ray of light is rigorously excluded. The complete darkness which is thus produced keeps the bees from straying from their hives, which are inverted, and left without floor-boards in order to insure perfect ventilation. Moveable comb hives only are not inverted, the same end being attained by removing the crown-board.

MAHOGANY BEE HIVES.—"S. A." would be obliged by the "MIDLAND COUNTIES BEE-KEEPER" stating the price of a set of collateral bee boxes, in polished mahogany, and the address where they can be seen.

RABBITS FOR WEIGHT (*A Constant Subscriber*).—We have seen rabbits that weighed 16 lbs. each; rabbits of from 9 to 12 lbs. are large.

RABBITS (*R. D.*).—We think the Hare rabbits the most profitable. The Flemish Giant is the largest.

STUFFING BIRDS (*Carolus*).—There is a small volume called "Taxidermy," which may be obtained through any bookseller.

POULTRY MARKET.—DECEMBER 18.

There is the usual lull that precedes Christmas, and trade is almost nominal till the great day of consumption is five or six days off.

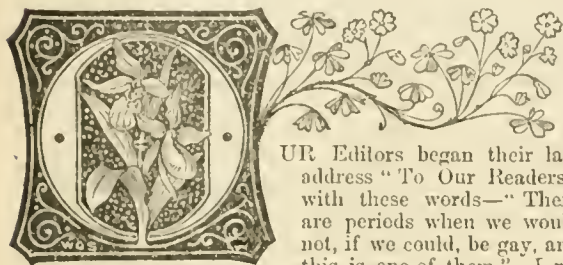
	s.	d.	s.	d.		s.	d.	s.	d.
Large Fowls.....	3	0	3	6	Pheasants	2	6	3	3
Smaller do.....	2	6	3	0	Partridges	2	0	2	3
Chickens	1	9	2	0	Grouse	0	0	0	0
Geese	6	0	6	6	Hares	2	6	3	0
Ducks	2	3	2	6	Rabbits.....	1	4	1	5
Pigeons	0	0	0	11	Wild do.....	0	9	0	10

WEEKLY CALENDAR.

Day of Month	Day of Week	DEC. 26, 1887—JAN. 1, 1868.	Average Temperature near London.			Rain in last 40 years.	Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.			
26	TH	ST. STEPHEN.	43.0	31.1	37.0	14	8	af 8	53	af 3	2	af 8	48	af 4	1	0	41
27	F	ST. JOHN EVANGELIST.	42.8	29.4	36.1	14	8	8	54	3	45	8	42	5	2	0	10
28	S	INNOCENTS.	42.2	29.2	35.7	12	8	8	55	8	22	8	39	6	5	1	40
29	SUN	1 SUNDAY AFTER CHRISTMAS.	43.4	33.4	38.4	18	9	8	56	3	54	9	40	7	4	1	10
30	M		44.7	33.3	38.5	16	9	8	57	3	23	10	42	8	5	2	89
31	TU		44.3	33.2	38.7	14	9	8	58	3	59	10	45	9	6	3	8
1	W	New Year's Day.	45.4	30.8	37.1	12	9	8	59	3	11	11	53	10	7	3	37

From observations taken near London during the last forty years, the average day temperature of the week is 43.4°; and its night temperature 31.3°. The greatest heat was 58°, on the 28th, 1855; and the lowest cold 1° below zero, on the 28th, 1830. The greatest fall of rain was 0.70 inch.

A FEW WORDS SUITABLE FOR THIS CHRISTMAS.



OUR Editors began their last address "To Our Readers," with these words—"There are periods when we would not, if we could, be gay, and this is one of them." I re-

echo these sentiments, for there is little cause for gaiety just now throughout Great Britain, even less than when the sentences I have quoted were written.

Many of those who read our pages are struggling manfully and womanfully (to coin a word), struggling in humble homes with large families, to make both ends meet. I allude to some gardeners by profession, those who, in this periodical, are our first care and consideration. To all such I would say, This is scarcely the time to indulge ambition, be thankful if you have a settled home, a blessed roof-tree over your head, and weekly incomes; small—would that they were larger—yet still, remember, certain.

Nor is this a time for encouraging emigration.

"It is better to bear the ills you have
Than fly to others which you know not of."

Many have recently gone abroad with a little capital, and that being soon spent, have become labourers in a land where a labourer has fewer comforts and mere hardships than he has in England. Such could have done better by remaining at home. Sending boys abroad is too often simply sending them—to starve out of sight. Oh! mothers! it is a sad state of things to have poor, faint, depressed, perhaps even sick sons starving out of sight of those who could have given comfort even by their very presence.

But if, as I believe, this is no time for indulging ambition, or for emigrating, it is a time for exercising contentment and economy; and especially for cutting off all unnecessary expenses, and putting an end to wasteful habits, and, to point the moral, let me tell a true tale.

A friend of mine called the other day upon a humble but bettermost family. There were a husband, a wife, and eight children, the earnings were now only 15s. a-week, 1s. 6d. a-head—that is not much. "Well, how are you getting on these dear times? sorry you are not so well off as formerly." "Why, sir," came the reply from the husband, "pretty fair; I've a good wife you know, and she brings up the girls well, and I do what I can with the boys. We work of an evening, and we read aloud, and by great care just keep the wolf from the door." "I hope you also keep all in of an evening." "Yes, sir, you know we all must meet at tea, and after tea our rule is, the door is never opened."

Parents! that is a great point. "After tea the door is never opened."

The visitor than said, "I suppose you still enjoy your pipe." "Oh! no, I am too poor for that now." Here was an instance of a man unselfishly putting an end to a wasteful habit, and which requires great self-denial to relinquish.

I hold that every woman is unselfish. We all had mothers, and were they not unselfish? Some of us have wives, and I ask, Are not they unselfish? But man is naturally selfish. In that body of his there is—and if he is honest he will own it—there is selfishness. A few men conquer it, but in all it has been; and if conquered many an indulgent, useless, expensive habit may be got rid of, and more left for wife and family.

So, let a household reform bill be passed this Christmas in your cottages, and with far better results, I am sure, than any extension of the suffrage. Talk it over in low quiet tones, suggest it in peaceful evening conversations, let not one talk at another, for that provokes a tart reply; but so talk that dispute there is none, but eyes looking through a soft mist show heart-aquiescence. Brother men! do not be selfish. While you keep the door shut after tea, also put out the pipe, if these are hard times with you.

But to turn to other subjects. There is that one of "French and English Gardening." Remember it is not now-a-days as in our father's time, when Englishmen used to talk of our natural enemies across the Channel; or that one Englishman could beat six Frenchmen; and so on. Even the game of "French and English" is given up now. Do you not remember how the old pictures represented it? A thin—so thin—Monsieur, fed entirely on frogs, as was believed, a kind of daddy-long-legs-man pulling with both hands and all his might at one end of the rope, straining back most earnestly until head and heels were nearly on the earth; while at the other end was a jolly laughing Englishman with "fair round belly," who only holds with one hand, the other being in his pocket. How all at ease he seemed, and not pulled out of the perpendicular in the least. But now it is all quite different, Frenchmen and Englishmen have hold of the same end of the rope, they together are pulling with civilisation, while at the other end are uncivilisation and all evils. So no opposition, please. The Gallie cock does not crow defiance at us, but gallantly spreads his wings, and dear old John Bull does not get red in the gills at the sight of a Frenchman.

The allusion to the cock spreading his wing reminds me of poultry, and that of the Hewitt Testimonial. What wealthy people poultry fanciers must be, and warm-hearted withal, to subscribe so largely. I shall ask for the words "Poultry Chronicle," to be printed in larger type, for I have read in somebody's writings—I mean somebody's compilations—that the "Poultry Chronicle" is "defunct." Or, again, considering how sadly small is the Thompson Testimonial, I might even ask for the name of "our Journal" to be in future "THE POULTRY CHRONICLE AND JOURNAL OF HORTICULTURE," for the supposed lesser has so thoroughly beaten, in generosity, the supposed greater.

I dare say many readers have with me felt it a positive relief to have taken in one paper this year which had not one word about Reform debates, or Fenian, or Béalial

troubles. So pleasant to cut open a paper and get rid of all these at once. To many ladies and gentlemen this is not a business, but a recreation paper. The citizen in his villa reads it when he has left London and business behind him, and I hope, nay, know, that we raise or cherish a taste for pure, simple, healthy, country pleasures in many hearts.

A young London lady made me sad once by her answer to my question, as to which part of the Park she liked best, thinking she would answer, The flower-beds; but she said, "Oh! of course, the Drive." Idle young ladies often grieve me, and remind me of the one I read of in "Nugæ Springfieldenses."

"An active young lady of Burstead,
For work of great usefulness thirsted:
So she played all the day
Bagatelle and croquet,
And worked all the evening in worsted."

Woman's business is something more than this. There are high duties and pure tastes, and to these latter I believe we supply food. Just as gladness and fun are caught from children (the only "merry" part of England left), so from the pages of a periodical devoted to pure recreations, pure tastes are in turn imbibed or strengthened, and I hope, too, we not seldom cast a sunbeam over hard business-life.

As to flowers there is in them a marvellously soothing power. A poor usher shut up in a noisy school-room, and, worse than that, boy-plagued out of school hours as well, when, as occasionally a better boy brought him a nosegay from his own garden in the country home, he, the usher, was wont to put it on his desk—that hard desk, type of a hard life—and glance at the flowers, and eyeing them was comforted and cheered, and forgot the horse-and-mill monotonous work of the school.

And the poor servant girl in London saves the half-withered flowers of the parlour (how old-fashioned I am! why, they are all drawing-rooms now), and decorates her kitchen-table with them, and as she sets at work of an evening looks at them fondly, for they remind her of the old garden in the country.

"They are flowers of enchantment. What ails her? She sees
A high hill ascending, a vision of trees,
And a single small cottage, a nest like a dove's,
The only one dwelling on earth that she loves."

We clergymen often witness the soothing power of flowers. I remember years ago, when a curate, the youngest child in a farm-house, one of a very large family, lying very ill of fever for a long period of time. Frequently I saw her, and the ride became so familiar that I knew every tree, almost every bird. It was the valley by a river, and I loved to watch the reed-buntings, with their black velvety heads, springing from Bulrush to Bulrush, and was amused infinitely by a brood of long-tailed tits, which ran Indian file up a bough of a tree near. On coming to the farm, there was always fear as to whether or not I should find the blinds down, and the house in mourning. Sometimes, for the illness varied, I had a shake of the head, at other times a cheery smile. The sick child was the pet lamb of that large flock, and was tended so carefully by her eldest sister—woman-grown and old enough to be her mother. In the long weakness after the fever, a weakness almost worse to bear than pain, and she was quite deaf too, I remember how her only pleasure was to have the petals of flowers put on a little box-lid in front of her, and with her thin, thin fingers she arranged them in devices, mingling the colours as fancy prompted. And so the bright garden she could not visit was brought to her in her sick room, and its flowers soothed the little sufferer, and what a good and hopeful sign we all thought was her noticing and loving the flowers!

We, of this paper, cherish a taste which soothes in sickness, and we also add to the pleasure which competition always gives from a schoolboy to an M.P., as we publish the list of awards at various shows, whether horticultural or poultry.

I would just ask how it is there are not more feather fanciers? Surely ladies who excel us in taste might find great amusement in breeding and rearing Hamburg and Sebright fowls, and German Toy Pigeons. All these call for much taste, and are the perfection of feathered beauty. Birds of weight require much labour, but birds of feather only taste.

I glance at the now almost past year. We have lost from the poultry world Lady Holmesdale, a cause for regret; yet as her beautiful stock has gone to various fanciers, they will tend to widen the ever-extending taste for poultry.

Other things I would say, but it is time I close this paper, for I am only an errant writer. This I would always remember, for the science and the direct instruction come from other pens. To these, and all readers and writers from 171, Fleet

Street, to — (Ah! where to? for I cannot tell), I wish a Merry Christmas and a Happy New Year, and to present all with these few words, which I deem suitable for *this* Christmas.
—WILTSHIRE RECTOR.

THE MISTLETOE.

THAT grave old authority, Sir John Colbach, says emphatically, "This beautiful plant must have been designed for further and more noble purposes than to feed thrushes, and to be hung up in houses to drive away evil spirits;" and we, as well as our readers, assent heartily, for the said "beautiful plant" is hung up as an invitation to "good spirits," for we have what follows from a clerical pen:—"On the north side of the church at M— are a great many Holly trees. It is from these that our dining and bed-rooms are furnished with boughs. Families take it by turns to entertain their friends. They meet early; the beef and pudding are noble; the mince-pies—peculiar; the Nuts half-playthings and half-eatables; the Oranges as cold and acid as they ought to be, furnishing us with a superfluity which we can afford to laugh at; the cakes indestructible; the wassail bowls generous, old English, huge, demanding lades, threatening overflow as they come in, solid with roasted Apples when set down. Towards bed-time you hear of Elder wine, and not seldom of punch. At the manor house it is pretty much the same as elsewhere. Girls, although they be ladies, are kissed under the Mistletoe."

So now for a few words on this one plant of merry Christmas, which has been handed down to us through countless generations, not as a relic of early Christian feeling only, but as one which played an important part on solemn occasions centuries before the humanising influence of Christianity was felt in our land. But without calling to memory the purposes for which this mysterious plant was employed in the Druidical age, I would draw attention to the Mistletoe of the present day, and its many peculiarities as a plant, differing so widely from others by which it is surrounded, and on that account it has through all ages been either an object of veneration or wonder, excepting, perhaps, amongst the unthinking, who see it in its greatest abundance in the districts favourable to its growth, and even they at times must be struck with the different character it presents from anything else they have to deal with.

The unlettered rustic is not the only one to whom the Mistletoe has appeared a puzzle. Those who have esteemed themselves authorities in cultural matters have more than once been at fault in their ideas of how this plant is propagated. Some of the early writers in gardening asserted that it was hopeless attempting its cultivation, as the seed must pass through the gizzard of a bird before it would germinate. This doctrine, very prevalent at one time, has been abandoned, for experiments have proved that the plant can be propagated by other means.

I believe that the Mistletoe is more plentiful in England than in any other country. I think I have heard of its growing in the north-west of France, but less plentifully than in some of the south-western counties of England; yet even in this country it has its favourite abodes, and these are not by any means those in which the rigours of winter are least felt. The counties which are said to supply the largest quantities to the metropolis and other large towns for the Christmas display are Herefordshire, Somersetshire, Gloucestershire, and Worcestershire, especially the first named; while to a less extent it is found near London. Still, the question arises—not easily answered—Why is not Devonshire included in the Mistletoe-producing district? No doubt it does furnish some, but its reputation for producing "The Mistletoe Bough" is not on a par with its cider-making, and I am told that this parasite is there far from plentiful; while in Cornwall, where the winter is even still milder, the Mistletoe is still more scarce, and in what little I have seen of the orchards of that county I do not recollect noticing any where the Mistletoe was growing, although the age and appearance of many of the trees indicated they were in a condition to support this singular production.

If this parasite is scarce in Cornwall and in a great portion of Devonshire, as well as in the south-coast counties, I may be justified in concluding that the Mistletoe does not like the sea breeze, and that salt air, as well as salt water, is detrimental to it.

I know of but one locality—the Meiklour woods—in Scotland, where the Mistletoe is found; and as rare is it in our northern counties; yet the largest plant I ever recollect seeing

was in Northumberland, and that upwards of thirty years ago. It had been introduced upon an old Apple tree growing in rather a sheltered situation, and it had passed through two or more winters without any very heavy snows, and was, moreover, held too sacred to be meddled with at Christmas. I by no means assert that larger specimens could not be grown near London, but the universal custom of seeking out all the large pieces every December prevents the plants attaining the size alluded to. The heavy snows of the winter of 1837-38 damaged the Northumberland specimen much; its low growth and sheltered position protected it from wind, which also makes havoc in winter with much that escapes the Christmas depredators in the south of England, by growing on the tops of Limes and other slender boughs that may be too high for the ladder at hand, and too weak to bear the climber.

Of the many species of trees on which this plant introduces itself I have never yet seen it on the Oak, and the number of places where it is so grown is very small—one, I think, being near Eastnor Castle, in Herefordshire. Its rarity on the Oak certainly does not arise from any lack of specimens of all ages scattered over the country, and I have in vain looked for the Mistletoe on some Oak trees we have here beside a circle of tall Limes, on which it is growing in abundance; high winds in winter lashing the tops, bring down the Mistletoe in quantity, but no growth appears on the Oak. Perhaps in the character of a young healthy tree the Lime is more favourable to the growth of Mistletoe than any other tree; but Mistletoe also grows on the Mountain Ash while in a healthy state. It is less plentiful on the Maple, and still more so on the common Ash; while the trees that produce the greatest quantity are the Apple and White Thorn, but usually aged specimens of both, and these trees, being most accessible and less affected by winds than the Lime, furnish the greatest supply.

I have but little to say on the Mistletoe's cultivation beyond what has before appeared in these pages, but to those who like to give it a trial I may say, that if the berries are bruised, and rubbed into a crack of the bark of an old Apple, Crab, or Thorn tree branch, and some simple means taken to keep them there, they will most likely vegetate. I have known a piece of thin muslin tied over the place, and by the time that decayed germination had begun; the growth, however, was slow for two or three years, and is even so with natural specimens. I believe, also, that inserting the seeds inside the bark, like budding, is also attended with success; but this latter appears to be a less natural way than the former, for without positively asserting my opinion of the way in which this plant is propagated naturally to be correct, I have not seen reason to depart from that which I put forth many years ago—that the birds which are fond of the berries, or rather the juicy portion of these, reject the seeds, which, clinging to the sides of their bills, they rub them off against any branch they may be perching on. That the birds do clean their bills in this manner is unquestionable, and that the seeds so deposited grow when favourably placed is very likely.—J. Rensen.

PEARS IN HADDINGTONSHIRE.

The past year has been a very singular one in a meteorological point of view, and the absence of sun and heat in summer and autumn has been exceptional. The consequent deterioration in quality of many kinds of fruits and vegetables has been noteworthy, and the flavour of the former especially has been much less racy. Amongst the kinds of fruit which have suffered in this respect seem to be the finer varieties of Pears; and it has occurred to me that if your correspondents in different localities were to record shortly in your columns the results of their observations of the effects of the past season, it might not only be interesting but useful to persons in those districts less favoured by climate, by enabling them to choose for cultivation those kinds less affected by unfavourable seasons. In my own small garden I have had fruit this year on the following kinds, and I give the result of a careful criticism of their flavour, &c., by myself and friends.

Benrre d'Amanlis.—Fruit of good size, well ripened, but flavour flat.

Urbaniste.—Smaller than usual, flavourless, and devoid of the usual sprightly juice.

Benrre de Capiaumont.—Small, and not up to the mark in flavour, but better than the preceding.

Eyewood.—Pretty good.

Maréchal de la Cour.—Fruit large, and more like itself in

appearance and flavour than the others. A most excellent Pear.

Benrre Diel.—Small, cracked, and deficient in flavour.

Crasanne.—Small, and poor in flavour.

Duchesse d'Angoulême.—Ditto, ditto.

Easter Benrre.—Not yet ripe, but below the usual size.

Penches and Nectarines even in orchard house had less briskness of flavour than in ordinary seasons. The best of the latter decidedly is Rivers's Queen Victoria, a most delicious fruit.—JOHN FERME, Haddington.

CARTHORPE COTTAGERS' IMPROVEMENT SOCIETY, AND ITS RESULTS.

"WHAT a fuss about striking Mrs. Pollock!" was the quiet observation made by a cottager to me the other evening, in the reading-room of the secluded agricultural village of Carthorpe, near Bedale, in Yorkshire. "Why, really, I had a plant this season from which I cut slips, and stuck them out in my garden, without any protection or preparation, only giving them a stamp by the side with my heel, and they all made fine plants." "Just so, my friend, the methods of propagating Mrs. Pollock are as easy and as numerous as to increase Tom Thumb from single eyes to high branches, if you like; but the man who understands the nature of plants will always succeed best, be the season of the year that he attempts it when it may."

My object in writing is not Mrs. Pollock Pelargonium alone, but the circumstance called to my mind what has been done in this village in a short time, and I wish to induce others to do likewise.

Here we have the privilege of reading your, and other journals, besides volumes connected with gardening, chemistry, botany, zoology, and the like, all through the liberality of G. J. Sergeantson, Esq., Camphill. We are supplied with a comfortable fire and light five nights in the week, from five till nine. This is well deserving of imitation by those who wish to elevate the working man in our rural districts.

One of the many benefits which have arisen, is the formation of what we call our Cottagers' Mutual Improvement Society, formed for the express purpose of encouraging that class in the cultivation of their gardens. This Society has now been in existence six years, and each year has shown a marked improvement in the produce, and so decidedly good is some of it, that our cottagers are venturing abroad to a few of the leading shows. One boasts that he has taken the first prize with Potatoes at one exhibition, and with the same four first prizes at the great north shows, and could discuss for an hour the merits of most of the leading sorts, amongst which you might hear that Milky White was a fine sort, if it was not so subject to disease, but, he says, "Early Oxford and Fairy Queen, are the sorts for me amongst rounds. The latter is particularly fine, eyes level."

Another cottager as confidently asserts he can from Handsworth, with good cultivation, and Lapstone Kidney, show both round and kidney-shaped tubers with a fair prospect of success, and creates some mirth as to being able to "come over" the judges in this matter; judges who frequently, as he says, write in the gardening papers, and who gave the first prize to his spring-sown Onions for winter ones, at one of those "so-called great exhibitions," as he styles them. The prizes being equal he did not care; but have they not lost caste in his eyes? Marvellously fine Onions, but fine as they were he intends to have still larger ones, for with his own practice and that of others communicated through the Journal, and having been studying to discover what is food for them, he finds potash to be one of the principal ingredients. So I leave him among the books, learning what potash is, a sure way to get a step higher in the estimation of his rivals, some of whom would tell your readers they had been deceived with the Nuneham Park Onion, but that White Spanish, its prototype, and Danvers, "are the sorts for them." They especially prefer the latter for August 10th, about the time of our show.

The improvement perceptible is not confined to vegetables, but fruit and flowers are also cared for in a manner scarcely expected by the Society's promoters—a fact worth mentioning. The Society gives a prize for border flowers. The word border not being found definite enough, such phrases as herbaceous, annual, perennial, &c., are quite common, with smatterings of botanical knowledge. Surely this must be the right path, instead of to the village alehouse.

The Rose is made to bloom on what was desert or waste, and

what were cheerless plots are now gardens filled in autumn with blooming Chrysanthemums, and early in spring with Crocuses, Tulips, Snowdrops, &c. When the exhibition day comes round—a sort of gala, which has nearly done away with the old riotous feast, held earlier—friends meet, and are greeted with “Come and look at my garden before we go to the show field, for there is one consolation, if my *Calliflowers* are not to be first to-day, the best being too early, we have had the pleasure of eating them, and I have learned to grow, and know the uses of many things which were only in the gardens of the wealthy. When we go in to dinner you will taste my Cucumbers, and the Celery, which must take the first prize to-day. I can have a bouquet, too, to please the wife and children.”

And here I may say is a decided improvement in taste since the commencement of our Society, and the only drawback, if it may be called such, to our pleasure, as we walk round the laden tables in the spacious tent, is the sly query, “Will the Squire find fault with his professional for not being able to produce such vegetables?”—UNTR.

MR. SALTER'S CHRYSANTHEMUMS.

“You will be disappointed at Mr. Salter's,” was said to me two weeks ago by one who had been there, when the rain, sleet, and snow were coming down, and making London about as miserable and filthy as I ever saw it look. It was enough to damp one who did not feel in very fever heat that day. But I did not like to forego my annual visit; and so, having accomplished the business which brought me to town, I started off for Hammersmith. And right glad I was; for, far from being disappointed, I saw such a treat in Chrysanthemums as I had not seen for some years. Let me not be mistaken. There is no doubt that this is an especially bad season for this flower; no doubt, too, that owing to Mr. Salter having been obliged to use fire heat the beauty of many of his flowers had faded, and the winter garden as a whole was not nearly so attractive as usual; but the feature that gave me so much pleasure, and which opened out to me vistas of still greater enjoyment, was the large quantity of new Japanese Chrysanthemums which Mr. Salter has succeeded in raising. But of these more presently.

The present is the most unfavourable season for Chrysanthemums that we have had for many years; indeed, Mr. Salter says the most so that he ever remembers. They seemed, he said, to do well until the month of September, but after that they appear never to have moved at all. November, which with us at the seaside was a fine month, was in Hammersmith a very dreary one—no sunlight; dark, foggy days, and as a consequence the Chrysanthemums would not open; and the application of fire heat to make up the deficiency of sunlight has, as I have said, not improved them. Still there were some very fine flowers to be seen—some which will please the most fastidious exhibitor, others which have the charm of novelty, and others which will make pretty decorative plants. There were also some of last year's flowers which were unmistakably good. Of these I would mention *Cadie's Perfection*, a bright red, with orange back to the “petals” (as one must call them, though properly florets), a fine incurved flower; *Dr. Lindley*, dark orange with amber centre, a broad-petalled, incurved flower; *Pingal*, a rosy lilac, very broad petals; *Lady Talfourd*, quite a gem, rosy lilac with silvery back, not very large, but one of the neatest and prettiest flowers ever raised; *Mrs. Heale*, a fine white sport of *Princess of Wales*; *Ossian*, large, rose, incurved flower, very double; *Prospero*, dark purple; and *Purpureum elegans*, quite a novelty in colour, rich purplish violet. Among Pompons *Madge Wildfire*, bright red with large golden tips, very novel and pretty; *St. Michael*, a dwarf *Jardin des Plantes*; *Little Kate*, blush with crimson centre; and *The Countess*, blush lilac, very neat, are excellent additions to our lists.

Of the flowers of the present season to be sent out in the spring, *Lord Derby*, a fine dark purple, is the premier flower, and will be eagerly sought after by exhibitors, as it incurves completely, and needs no dressing. *Princess Beatrice* is a fine flower raised by Mr. Wyness, gardener at Buckingham Palace, a silvery lilac of fine quality, beautifully incurved; *Guernsey Nugget*, fine golden yellow, of large size; *Princess of Teek*, fine large white; *Miss Mauchaux*, pure white, with broad petals; *Lilac Beverley*, a sport from that fine flower *Beverley*, and equalling it in form; *Golden Orb*, a large rich yellow flower, of brilliant colour; *Enamel*, pure enamelled white, a fine show

flower. There were two very distinct flowers—*Captivation*, a reflexed flower, carmine with white centre; and *Mrs. Huntington*, the most distinct flower of the season. Of all Chrysanthemums *Aimée Ferière* is, or was until now, the most distinct and beautiful. And yet how seldom one sees it! Its delicate pure white, and beautiful carmine tips, always make it very attractive; and I often wondered how it was that we never saw a move in that direction. At last we have it. This beautiful flower which Mr. Salter had called *Rival Aimée Ferière*, but which he kindly allowed me to change to the name it at present bears, is like the older flower, more compact, however, in shape, and with much darker tips to the petals; and I feel sure it will be a favourite flower with all who value delicacy and distinctness.

And now the Japanese Chrysanthemums claim our attention, as I believe they are likely to do for some years to come; for the results now obtained are, I verily believe, only the first fruits of a rich harvest. When, some years ago, Mr. Fortune introduced seven varieties from Japan, and Mr. Standish exhibited them at one of the Horticultural Society's meetings, there was a great diversity of opinion as to their value. Many ridiculed the idea of such “Ragged Jacks” being of any use; while others, myself among the number, believed that they would be found ultimately to be of great use. The Jersey and Guernsey men, who have originated so many varieties of the true florists' kinds, would have nothing to say to them; they were as great an abomination in their eyes as an Alpine Auricula to my friend Mr. Lightbody, or a hybrid Orchid to a botanist. Mr. Salter thought better of them, and he has been successful in crossing them with the Chinese Chrysanthemums, and producing a most curious race.

Some of them are like those “penny spiders” which you see the men dangling up and down on a piece of elastic in the streets; others are more like the paper cuttings which ladies are such adepts in making, and hang about in most curious-looking tufts; others have long pointed filaments; others are spotted in their petals like some of the *Odontoglossums*; and all are curious. Moreover, they are later than their Chinese consins, and hence they will most probably supply a gap, which nothing else has yet filled up, between the Chrysanthemums and the early spring flowers, such as *Cinerarias*, &c.; I mean, of course, with those who have not the appliances of forcing.

One of the most curious is that to which I have alluded above—*Tarantula*. It has a thick button-like centre, and long narrow petals spreading out in a single ray only, giving it a most weird appearance. Next there is *Wizard*, a maroon-coloured flower, in which the petals hang about in a most curious manner, forming elegant-looking tufts. Then there are *Red Dragon*, brown, with yellow tips to its long thread-like petals (I prefer using this to the more correct term *florets*); *Comet*, yellow and orange; *Robert Fortune*, orange and brown, large, and very striking; *Sulphureum*, large, white, sulphur centre; *Anrelian*, very large yellow; *Leopard*, Indian red spotted with yellow, almost like some of the Orchids; *Purpureum punctatum*, purple and white spots; *Nagasaki Violet*, clear rosy violet, spotted with white; *Aurantium*, a large and showy yellow flower. There are other varieties which are yet to bloom; but from what I have said it will be seen that there is already a very large variety, and these are, I think, but the precursors of others. I believe that other growers are working in the same strain, so that we may look forward to probably as interesting results as when Mr. Fortune introduced the little *Pompon Chrysanthemum* so many years ago.—D., Deal.

GROWING Madder IN ASSAM.

A FRIEND of mine has just returned from Assam (India), and brought with him roots of a plant growing there in wild luxuriance, from which the natives extract a beautiful dye. These roots being sent for test to a large cotton dyeing firm in Manchester, they state the colour to be excellent, but the quantity of colouring matter too small to pay for importing the roots from India, as a substitute for Madder, of which this one firm consumes annually some £30,000 worth.

Is this plant (of which I enclose leaves) a species of Madder? if so, I should suppose that the true Madder, if transplanted to Assam, would flourish well, and under the influence of that hot, humid climate, would be matured in a much shorter time than in the south of Europe.

The friend I allude to, is about visiting the tea planters in that country again, and if there is a probability of success in

attempting to substitute the true Madder for the less valuable native plant, he has no doubt of its being a good speculation.—G. L.

[The leaves enclosed are not of any species of Rubia that we know. It is probable that Rubia tinctoria, the true Madder plant, would thrive in Assam, for it is a native of the warmer countries of Europe. If any of our readers can furnish us with reliable information we will readily publish it.]

A PLEA FOR TEA ROSES.

WHY are not Tea Roses more generally cultivated? For one good collection of Teas it is easy to find a dozen Hybrid Perpetuals—I beg Mr. Keut's pardon—of Remontants. Even at the great shows the Teas are not always well represented, while at many of the country shows they are absolutely nowhere, and a difficulty is found in inducing any real competition for the Tea Rose prizes. One important reason, no doubt, is the risk incurred in growing them. Many of them require glass; and why should they not have it, when numbers of other plants, far inferior, are indulged to the uttermost? Why should Tea Rose houses be still but a glorious vision, unrealised even in places where there are wealth and expenditure enough to do anything? We have still very little idea of what Tea Roses are here in England, and yet they are particularly easy to propagate. But, then, the winter!

No doubt it is almost useless to attempt to grow Tea Roses budded on high standards. Every severe winter there is a slaughter of these that is melancholy to contemplate. But on Manetti stocks, or on their own roots, there is no difficulty in protecting them, and how amply they repay all the labour bestowed upon them. If there are nobility, gentry, and commoners in the Rose garden, certainly every Tea Rose will come into "the upper ten," while many of them must be admitted the very cream of the cream.

Even the old *Devoniensis*, Adam under glass, *Triomphe de Rennes* anywhere, *Madame Falcot*, and *Safrano*, almost the hardest of all, how unapproachable are these by the best of the Remontants! And then the new ones we are promised—*Bouton d'Or*, a gold button, *Madame Margottin*, and *Reine de Portugal*, to be the queen of the dark yellows. Who can read "our Journal" without falling in love with these? Another advantage the class of Tea Roses possesses is their comparatively small number. Only the leviathans of the Rose gardens can pretend to a perfect collection of Remontants, but all the good Teas may be brought together in a garden of very narrow limits; the harder ones in a protected border, the tender in pots, to return to frames during the winter. Once more the range of necessary purchase is thus considerably limited, and this is, after all, no small consideration, for "Hobby horses are more costly than Arabs."—A. C.

PROPAGATING PELARGONIUMS.

MR. PERKINS (see page 411), seems to have a very bad opinion of my method of propagating the Pelargonium, and considers that amateurs would find themselves in difficulties were they to adopt it. Will Mr. Perkins state his reasons for coming to the conclusion at which he has arrived? and then I may, perhaps, be able to clear away any mistrust in regard to my plan.

I can assure him that amateurs who have adopted my system have had no occasion to fall back on the plan that Mr. Perkins adopts, for they have found that they not only fill their flower beds better, but they can keep them gay for at least three weeks longer before beginning to take off cuttings.

If Mr. Perkins can begin to take off cuttings as early as your correspondent "R. E." stated on page 277, there would be no advantage in adopting my plan, but the reverse. I distinctly stated, however, that I began taking off cuttings during the last week of August. I generally propagate nearly twenty thousand every year, and seldom lose many more than Mr. Perkins.—JAMES STEWART, *Nuneham Park*.

RED FRONTIGNAN VINE WORKED ON THE ROYAL MUSCADINE.

IN your Journal of the 12th inst., I observe a communication from "J. W." respecting the influence of the stock over the graft. Perhaps you would like my experience on the subject.

Four years since I inarched the Red, or Grizzly Frontignan on the Royal Muscadine Vine; it has borne for two years fruit of excellent flavour with the true colour of the Grizzly Frontignan.—R. H. A.

DOUBLE-BEARING RASPBERRIES.

ON page 363 Mr. Stewart, of Nuneham Park, says, "I have often heard gardeners speak of double-bearing Raspberries, but have never seen such, excepting when strong summer shoots have flowered and then become useless."

I write to inform Mr. Stewart that the fruit of the double-bearing kind is produced on the top of the young canes, and that after they have fruited the bearing portion must be cut off, say now or earlier; and the remaining 4 feet of cane, tied to the stake, will produce a good crop of fruit at the same time as the summer varieties fruit. I have never seen any autumn Raspberry fruit on the whole length of cane, consequently the lower eyes remain dormant till the next season, and then push at the usual time.

I shall be glad to make an exchange with Mr. Stewart of a few canes if he thinks he has any different kind from the old double-bearing.—E. WELSH, *Palace Gardens, Armagh*.

GARDENING AT ADELAIDE, SOUTH AUSTRALIA.

HAVING signified your desire to receive communications from various parts of the world on gardening experiences, I venture to send you some of my own, in this little and somewhat unknown colony of South Australia, thinking that they may afford to others in a small degree some of the same interest that communications of a like nature have given to myself.

Our climate is, in my opinion, very fine, and particularly suitable for floricultural pursuits, if a moderate supply of water is to be had with little difficulty, which I am happy to say is my own case; but, on the other hand, skilled labour is very hard to secure, and when secured, harder to retain, and it is very difficult to procure the European novelties with any degree of certainty. Plants, however carefully packed, have many perils to encounter in a three-months voyage, and so many die that the survivors cost too much to be within reach of most amateurs, and then have to undergo the difficulties of acclimatisation. Then with seeds it is nearly as bad. The descriptions of flowers in the published catalogues are very glowing, but either from the want of true seed, or from errors of description, great disappointment occurs with such as are raised; but not one-quarter of the varieties of seeds that I have imported ever came up at all, and of those that do vegetate, in many cases there may be only one or two plants from a packet of seed. I imagine that this is caused by the voyage, as I have not confined my orders to any particular house, and I find there are particular seeds which I have never been able to raise at all; some of these are certain varieties of *Delphinium*, *Aquilegia*, *Poppies*, and *Phloxes*. With others I have failed for two or three years, and then the next season's supply would come all right. It would, however, be a great boon to cultivators at a distance, if there was a reliable catalogue to be had, from which the poor worthless descriptions of flowers were expunged, and where varieties differing from their progenitors only in some inappreciable particular, should not figure as something new or rare. I may add that I now always have my seeds sent out by post, as I find they arrive in far better condition than when packed in tin cases.

It is somewhat difficult to lay out a garden here very tastefully, from the impossibility of obtaining that great groundwork of an English garden, a nice lawn. The only Grass I have yet met with that will retain its greenness in summer is the Couch Grass, but it is so apt to take possession of the whole garden, that it is exceedingly objectionable, independently of the difficulty of mowing it and keeping it in good order. I am now trying it as an experiment, with no little anxiety, after repeated failures with other things, one of which was the *Spergula pilifera*, but that was burnt up the moment the summer commenced. If any of your correspondents could suggest a Grass suitable for this purpose, and that would stand our climate, I should feel very grateful.

I do not exactly know what should be considered our fair average day heat in summer, but I should think about 75° to

80° in the shade, and this occasionally rises to 110° or 115°; but such are quite exceptional days, and I do not think we have more than a dozen in the year when the thermometer rises above 100°. This heat is very dry, and not nearly so trying as the Indian heat at 90°, while the nights are generally very pleasant and comparatively cool. Our rainfall is very light, 22 inches being, I believe, our annual average. Last year we had about 18 inches only, and the year before that very little over 14 inches. In the hills (I am living on the plains), the climate is more moderate, and in winter ice is often seen. There, too, all the English fruits flourish, and everything that can be grown in England will succeed, as well as many crops besides.

Here, on the plains, our staple fruits are the Grape, Orange, Lemon, Loquat, Peach, Apricot, Fig, Plum, Pear, Apple, &c., (the latter, however, suffers very severely from the American blight), besides many minor productions, such as Tomatoes, Cape Gooseberries, Melons of all kinds, and Cucumbers. The Vine appears as if it were a native of this country, so freely does it grow and flourish with the rudest and harshest treatment; nothing seems to hurt it, and no insects attack it, at any rate to do it much harm; and when I say that I cut Grapes this season from the beginning of February to the beginning of June, its utility will be understood. The yield of fruit, too, is enormous, especially on trellises. The colony can boast of a large number of varieties; but as wine-making is now an important industry here, more attention is of course paid to the wine description, and large vineyards have been and are being planted. I may add, that the flavour of not only our Grapes, but other fruits, is very fine and luscious.

Vegetables in the hilly districts do very well, but on the plains they are not so satisfactory. The aphid or cabbage blight which made its appearance about a dozen years ago, seems to be as virulent as ever; and other crops are so uncertain, that I have given up attempting to grow any in disgust—finding it cheaper and more satisfactory to buy than to grow, though we pay from 4d. to 6d. each for Cabbages.

All the *Aracarias* and *Cypresses* thrive here, and I am glad to say are beginning to be planted pretty extensively. One *Cupressus Lambertiana*, which I planted two years ago when about 9 inches high, is now between 8 and 9 feet; other descriptions which I put in at the same time, though doing very well, have not made nearly the same growth. I find it an excellent plan to plant the *Eucalyptus* known here as the Red Gum, freely in the background of the borders. They seem to shelter and assist the other plants greatly, and then in three or four years, after their work is done, they may be taken out. The Blue Gum of Van Diemen's Land, *Eucalyptus globulus*, answers equally well. Their growth is exceedingly quick, making 10 or 12 feet in a couple of years. A study of these various Gums would, I think, be very interesting to the botanist, as the species are very numerous. Many of them, such as the White Gum and the Stringy Bark, appear to possess some noxious qualities which make it impossible to grow anything within their shadow; but with the Red and Van Diemen's Land Gums I do not find this at all, neither with the Scarlet-flowering Gum, the flower of which is exceedingly pretty, while the foliage is much more scanty; each leaf is large and thick, but invariably turns its edge completely upwards instead of lying flat. I have this season raised a (to me) new kind from Western Australia, the flower of which is 3 inches in diameter, while the seed-vessel is 3 inches long by 2 inches square, having the same square character as the Van Diemen's Land Gum; the foliage is narrow and long.

* Flowering shrubs appear to great advantage here, exhibiting a luxuriance of growth and a capability of flowering not often seen in those descriptions which are usually to be met with under glass at home. Many flower three or four times in the course of the season; others remain in flower the whole of our long dry summer. Of these I would especially point to the *Lantanas*, *Abutilons*, *Hibiscus*, *Brugmansia Knightii*, *Erythrina*, *Euphorbia splendens*, and another the name of which I do not know; and *Grevillea Forsteri*, of which, as an ornamental flowering shrub, I cannot speak too highly. Then we have the *Habrothamnus*, *Lochroma*, *Cestrum*, *Pittosporum*, *Magnolia*, *Ligustrum*, *Melaleuca*, *Metrosideros*, and a host of others too numerous to mention; indeed our list is a very long one, and I am glad to say increasing every year to no small extent. Those plants that succeed so well I am only too happy to have, but still my greatest interest lies in those which are supposed to be unfit for our climate, such as *Camellias*, *Azaleas*, *Poinsettia*, and many others, and I feel little doubt that if they could be induced to

live for a couple of years they would succeed. Indeed, I know one *Camellia* in as hot and trying a place as could be found, which is 7 feet high, and is one mass of flowers in the flowering season, and if one can be brought to succeed, I do not see why others should not.

Deciduous trees and shrubs are in little favour here, which is perhaps quite natural, as they are not, as a rule, well adapted to our climate, and all our indigenous plants are evergreen; besides which, we really have no winter worth calling one, as may be understood when I say the Almond trees, which have been planted very largely, are only out of leaf a few weeks.

I feel that I have spun out my remarks to a rather unconscionable length, and will therefore draw to a close. Should they, however, be deemed sufficiently interesting, I shall be happy at a future time to touch upon our capabilities in the way of climbers, bulbs, and bedding plants. In the latter, from our excess of insect life, I feel sure we shall some day come out strong as hybridisers and raisers of new varieties.—SOUTH AUSTRALIAN.

DEEP-PLANTING ROSES.

ALLOW me to inform Mr. Radclyffe of a case that came under my own observation. About six years ago I was moving a number of Roses from one garden to another, in the course of which I came upon several Briar Roses, some being Hybrid Perpetuals, the others Summer Roses. They were apparently about 4 feet high, and were planted against a low wall, so that the heads just stood above the top of it; but to my surprise, when I came to take them up I found them buried about 2 feet in the ground, they having been originally planted on a much lower level, and the ground afterwards raised, as in "P.'s" case, without lifting the Roses. I can assure Mr. Radclyffe that in this case there was not the slightest attempt made at forming roots up the stem, and with one exception they were all in perfect health.

The soil in which they were growing was a rather strong, dark, deep loam.

They were taken and planted in a light gravelly soil in the usual way; but as I left the place shortly afterwards, I cannot say whether they were benefited or otherwise by the change.—W. BILL.

WINNIGSTADT CABBAGE.

THE above Cabbage, I think, is not grown or known among gardeners so much as it deserves to be. I never saw it anywhere previous to growing it this season.

I received a packet of seed, with others, through my employer, from the Royal Horticultural Society. I planted two rows on June 23rd, along with Savoys and other Cabbageworts, and find it the hardiest and most useful autumn and winter Cabbage I have ever grown. It seems likely to stand frost and damp, which are most destructive here on account of the low situation of the gardens, and I find it difficult to save Brussels Sprouts and Savoys in severe winters.

This Cabbage has a peculiar pointed shape towards the top, grows very close and heavy, and does not become reduced like other kinds in boiling. The flavour is everything that could be desired. I should be glad to know where seed can be purchased.—E. WELSH, *Palace Gardens, Armagh*.

SHRUBS UNTOUCHED BY RABBITS.

NOT being without experience in planting for cover, I venture to reply to "H. B.'s" inquiry, that I believe there is nothing absolutely safe from rabbits but *Rhododendron ponticum*. I find, however, that good bushy plants of Yew are so far safe, that the rabbits seem satisfied with the terminal shoots and do not touch the bark; and if the leading shoot is out of their reach, the Yew will in time obtain the mastery, and will spread and cover the ground.

Black Thorn makes excellent cover, and I have a clump of it thickly tenanted by rabbits, but in it I have never noticed the marks of their teeth, even at times when the Quickset hedges have been nearly destroyed. It is, however, to be remarked, that established shrubs are less subject to the depredations of game than those newly planted. I mention the fact without being able to account for it; but "H. B." will find in the case of many shrubs, that if he can only protect them the first year they will scarcely require it afterwards.

I have been told that St. John's Wort makes good cover and is untouched by rabbits. Of this I have no personal experience.

There is a Grass called *Aira cæspitosa* which forms tuasacs that are first-rate cover. It is not, I suppose, palatable, as even when game is very plentiful it is seldom cropped, and if not too young and too small when planted out, it would, I think, be pretty safe from rabbits.

When it is desired to form really good cover, the most satisfactory way of doing it is to commence by exterminating the rabbits. They can easily be increased again at very short notice. Where they exist in any number every shrub planted out must be protected. In many cases I do this with wire-netting, but when the leading shoot is out of reach of game, I find I can protect the stems by daubing them with coal tar. If put on too thickly it kills the trees, but the upper half of the cask of black varnish sold for wire fences, will be found safe and effective. A few branches laid on the ground during snow will be found to save a great deal of damage, since no rabbit will touch growing trees if it can find a prostrate one at which to nibble.—MONTICOLA.

NEW BOOK.

Rain—How, When, Where, and Why it is Measured. By G. J. SYMONS, F.M.S., &c. London: E. Stanford.

THIS is a two-shilling little volume, full of many and curious facts; and as every scrap of knowledge will some day prove useful, we accept these facts gratefully. At present they are curious facts, and nothing more; we will epitomise a few of them.

A rain gauge collected 10 inches of rain when level with the ground, but at 20 feet above the ground only 8.8 inches.

The earliest gauger of rain was R. Townley, Esq., at Townley, in Lancashire, in 1677, and other gaugers have succeeded to him, until in 1866 there were no less than 1212 rain gaugers dotted about the British Isles.

In 1827 the water companies supplied London with twenty-nine millions of gallons daily; in 1866 with ninety-six millions; and by 1890 it is calculated that one hundred and eighty millions will be needed; but we do not see that gauging rain will teach how that supply can be kept up.

Returns have been obtained of the approximate mean annual depth of rain at one hundred and sixty-five stations in the British Islands, and they range from 20 inches at Lincoln, Southwell, and Stamford to 165 inches at The Sty, at the head of Borrowdale, in Cumberland.

July, August, and October appear to be the wettest months at most stations; but in mountainous districts December, January, and February.

It is tolerably certain that the annual fall of rain, taking the averages of many years, is tolerably uniform.

NOTES AND GLEANINGS.

M. T. BASS, Esq., M.P., has consented to take the chair at the Anniversary Dinner of the GARDENERS' ROYAL BENEVOLENT SOCIETY to be held next summer; and Sir Robert Peel, Bart., M.P., and several other gentlemen have intimated their intention of supporting Mr. Bass upon that occasion.

—In a lively book of American travel, its title "Black and White," by Henry Latham, the following passage occurs relative to that most interesting of all trees, the WELLINGTONIA, and its new habitat:—

"I met Mr. King just returned from a six-years government surveying expedition in Colorado, New Mexico, and the Sierra Nevada. He described the enormous trees on the western slopes of the Rocky Mountains. In one part they discovered a belt 150 miles in length of the Wellingtonia, the big tree of the Crystal Palace. One hollow trunk, of which both ends had been destroyed by fire, lay on the ground. The whole party rode their horses through the tube from end to end. In the middle the tallest of the party stopped his horse, and, standing on his saddle, could just touch the roof of the tunnel with his hand. This may sound scarcely credible, but I am informed and believe that Mr. King is one of the most veracious and reliable of men."

—EXTRAORDINARY efforts have this year been made to celebrate Christmas at the CRYSTAL PALACE. Although in former years the building has been decorated in an extremely

gay manner, the decorations of the present Christmas may safely be said never to have been surpassed. Flags, streamers, banners, garlands, Holly, Laurel, shields, and baskets of flowers hang from every girder and rib, and are artistically arranged amid groups of statuary, &c. The Centre Transept has been converted, by judicious decorations, into a room—a large one truly—but the vastness of the *locale* is forgotten in the warmth of the decorations, and in the air of comfort which pervades the building. The great Christmas tree—nearly 100 feet high—has been erected in the North Nave, and is decked gaily with every imaginable ornament. The Fancy Fair and Bazaar—replete with Christmas presents suitable to all—is in full vigour, the entire Palace exhibiting an activity and brilliance unusual at this season.

WORK FOR THE WEEK.

KITCHEN GARDEN.

THE following hints on the good cultivation of the soil may be useful to amateurs. Drain until rain water runs freely through and off the soil, and does not stagnate in it. Turn up the soil until the foot sink into a deep loose loam, into which the sun and air may readily penetrate. To this end the soil should be deeply trenched in autumn when the crops are taken off, and laid up in rough ridges, which must be again turned over in midwinter after being well frozen. In the spring these ridges are to be broken down with a fork, ready for sowing and planting. Collect every particle of manure, whether liquid or solid; horse-droppings and road-scrappings are useful when mixed with the soil. Convert all kinds of rubbish, refuse, greensward turf, or heathy turf, into charcoal, by burning in a close heap; if your land is heavy, clay burned in the same way is an excellent dressing. Provide a tank in which the liquid from the cow-house, pigsty, the house, and the wash-house, may be collected; an old barrel sunk in the ground, or a hole dug and lined with soft clay or puddle, will do. Suffer no weeds to grow; they rob the soil, choke the useful crops, and serve no good purpose. Give every plant room to spread its roots in the soil and its leaves in the air; there is nothing gained by crowding. At the same time make the most of the ground by double cropping—that is, planting the crops in wide rows, introducing another kind of crop between them to take their place. Change the nature of succeeding crops on the same ground as much as possible. Do not dig or trample on the soil when it is so wet as to become adhesive like paste. Water the crops in dry weather with the liquid from the tank, diluted if necessary. This is best done in showery weather, or in the evening when the weather is dry; give a good soaking, and loosen the surface next day with the hoe. Never let the surface become caked, or cracked; prevent this by deep hoeing. The *Potato Onion* is a most productive crop; the small offsets should be planted now in beds 4 feet wide, four lines (not drills), to be drawn 10 inches apart on the beds, the bulbs to be placed upright and slightly pressed into the soil, and to be merely covered with leaf mould, or any light soil. When they appear above ground earth-up on a fine day. The crop will be ready to take up in the end of June, to succeed the August-sown Onions.

FRUIT GARDEN.

Proceed with pruning and nailing as previously directed. Whilst the ground is not frozen, trench as near the roots of fruit trees as can possibly be done without injuring them, and work in fresh compost with a fork. In bad weather prepare nails and shreds. Nails should be heated, but not to redness, and then plunged in linseed oil. Frequently examine Apples and Pears, and remove all that exhibit the least symptoms of decay. Place a number of fragments of unsleaked lime in small flower pots or boxes throughout the fruit-room, in order to render the air dry and sweet. Lime will continue to absorb moisture from the surrounding air till completely slackened, and before this becomes the case a bushel will absorb an amount of moisture equal to five gallons of water. The seed-room should be kept cool, yet perfectly free from damp, which should be effected without the admission of a current of air. This can be done by the means above recommended for the fruit-room. It is a good plan to procure more seeds than will actually be required for one season, for although seedsmen ought to be answerable for the quality of their seeds as far as their vegetation is concerned, yet they may be deceived with regard to some of the varieties coming true to their kinds, and therefore if you have had seeds of Cauliflowers, Walcheren Broccoli, &c., which have come true this season, take care of

any seed that may have been left. Plants from such can be depended on, whilst those from the new seeds may prove a degenerate race.

FLOWER GARDEN.

Rhododendrons in woods would be much benefited by having a small quantity of leaves placed over their roots, to keep the ground moist during the summer months. In wet weather prepare labels, sticks, crocks, &c., for spring and summer use. See that recently planted shrubs and trees are not loosened by wind and rain. Protect bulbs if the weather changes to frost. Nail and tie up climbers on walls, trellises, &c., and protect the roots of any that are not perfectly hardy. After frost examine all plants in beds, as Carnations, Pinks, and Pansies; fasten them as required. Small fir branches, 6 or 9 inches in length, stuck round and amongst the plants, will have a very beneficial sheltering effect. Collect leaves, turn soil heaps, cast leaden labels, prepare layering pegs, mend and make shades for Carnations, and see that everything is put away ready for use.

GREENHOUSE AND CONSERVATORY.

Observe to keep as moderate a temperature as possible where the Camellias are in bloom, in order to prolong their season. As drip is rather inconvenient during frost, we would recommend that the roof be covered with a canvas screen, which, by preventing condensation through the low roof temperature, will accomplish the object effectually. By so doing you will be enabled to water all available surfaces to keep up a considerable amount of atmospheric moisture, which Camellias much delight in. Apply water to Heaths and New Holland plants; to such of both as are coming into flower more liberally than to the others. Assist the early Pelargoniums, but keep the summer plants cool and airy.

STOVE.

It will soon be time to commence potting the Orchids. Let a stock of proper materials be provided, therefore, without delay—namely, free fibrous heath soil, cut into pieces about the size of a Walnut, fresh sphagnum chopped or cut, plenty of broken crocks, and charcoal in lumps. The whole of these materials, except the crocks and charcoal, should be subjected to some process that will destroy snails and other insects, with their eggs. Scalding the sphagnum and peat is sometimes resorted to, but the process so much hastens decomposition in the vegetable matter, that it soon becomes a pulpy mass, impervious to the atmosphere. It is better to lay it in some very warm and dry place, turning it occasionally. The uncertain state of the weather will entail an unusual degree of attention on the part of the cultivator, as the application of a large supply of artificial heat at one time, and the absence of it at another, are alike dangerous to all plants under glass, but particularly so to those requiring a temperate climate. It will, therefore, be absolutely necessary to employ a more than ordinary amount of diligence and forethought to ward off the destruction which will assuredly follow the least negligence. The young gardener should set about studying the atmospheric changes, being guided in a great measure by the instruments usually employed for that purpose. Nothing relating to his profession can be of much more use to him than an intimate acquaintance with these changes, which so seriously affect his pursuit. A gardener, in fact, is always at the mercy of the weather. A chief part of his occupation is to apply heat and water to counteract the drying and freezing effects of summer and winter. To understand how to apply these without injury to vegetation is a matter of great importance to all plant growers, more especially to the inexperienced in such matters. They cannot, therefore, do better than begin the year by making themselves thoroughly acquainted with the subject.

PITS AND FRAMES.

Plants suffering from drip must be removed to a better situation, in order to prevent their roots from perishing. Cold pits and frames ought to be defended by linings of fern, or leaves, to repel the frost. Give air freely when the weather is not frosty. Avoid watering at this season, and remove all damp leaves, &c., the moment they appear.—W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

As the frost of the 19th and 20th threatened to be severe we covered beds of Coleworts fit for use with a little litter, likewise rows and beds of Endive and Celery. To save trouble, uncovered but little where there was no artificial heat on the

20th, leaving everything very nearly in the same condition, as regards protection, as in previous week's notice.

Placed more roots of *Sea-kale* and *Rhubarb* in the Mushroom-house, and filled another light of a frame with *Asparagus* roots. When these are packed close to each other a single light holds a great many. In taking up and storing roots for use we do not care about having much earth with the roots; but we do not like them to become dry. We save carefully every bud, and if the roots are very old, and part of the heads of the roots destitute of buds, we break the plants into pieces that the space may not be taken up with parts that will yield no heads. We then commence at the back of the bed, place there a row of plants as closely together as they will go, with the roots spreading out to the front, and on these we scatter a little fine soil. The second row of heads goes close to the first and over these roots, the roots of the second row being covered a little in the same way, and so on to the front. We then give water at 80°, and cover with 2 or 3 inches of soil. Thus packed, many good dishes may be gathered from one light of a frame—so many, that we rarely fill more than one light at a time, as we want successions, and not such a glut as to be forced to send forced *Asparagus* to table every day.

Cauliflowers coming in well in an earth pit have been securely protected with litter. Holes must be carefully looked after, and care taken that there is no opening between the covering and the earth walls.

Kidney Beans.—Potted those sown in small pots, and sowed more in a similar manner, placing them where they will have a little fire heat to keep them coming on slowly.

Collected leaves when opportunity offered, and began putting a little dung in readiness for forwarding crops. We have found that but little is gained by doing much until the shortest day has passed, it requires so much to make up the leeway with a declining sun; but everything seems to start with new vigour afterwards. We have sown *Radishes* in a frame in November and on January 1st, but there was no comparison between the produce. We generally, on that account, depend on late-sown *Radishes* for the winter months, merely protecting them from frost. After the end of December they grow so much sturdier and shorter-topped, and, coming quickly to maturity, eat so much crisper, than those striving for existence during the winter months. It is much the same with young *Potatoes*. We start them in pots or boxes now in a little leaf mould in a rather warm place; but they always do best with us when planted after the new year. When new *Potatoes* were an object all the winter, we used to keep old *Potatoes* over the summer, and place them in layers in dry soil or old tan in the autumn in a heap in a warm shed, and they were quite as good as could be obtained in pits and frames at that season, though not to be compared to a spring-produced *Potato* in a mild hotbed. We have also planted out *Potatoes* in the middle of July, and even the end of it, taken them up when cut down by frost, and kept them in dry sand; and though they were waxy enough for those who like them in this way, we cannot say that, except for passing as new *Potatoes*, there was much to recommend them. In the majority of cases, going to much trouble in such matters is labour thrown away. However, such crops may be easily had if wanted, if there is convenience for them. With most of us, however, all the good old rules about a place for everything, and everything in its place, have long been transgressed, as every place has to serve a multiplicity of purposes. The cramming system must be resorted to in most places, and the consequence is that the labour in moving so often would ere long nearly pay for larger and more suitable conveniences.

Mushrooms are useful for filling up at this season. Another piece of a Mushroom-bed has been spawned and earthed-up, and manure placed in the house to help to make one more piece, and we may mention that the moist heat from such manure, when in course of preparation, has been nearly enough to keep the other beds bearing without much other heat. For the sake of beginners, however, we must say that our bearing beds are slightly covered with dry, rough hay and other litter. Without that we would not have the rank dung in the house, as the steam might injure and discolour the *Mushrooms*. In our house, lean-to, we have a small ventilator at the apex at each end, the size of a brick, and that prevents moisture condensing and falling on the beds. The plan of placing the manure in the house to work and become sweet and dry enough, answers well under these circumstances. When we do not cover the beds, and when we make a fresh piece, we prevent steam and moisture rising by placing over

the new piece some dry turfy soil, which we can have either as part of the covering of soil, or may incorporate with the manure before spawning. We very often use a considerable portion of dry turfy soil with the manure, especially in winter. As it is right, and only right, that a partial failure should be chronicled as well as a success, we may mention that our last piece or bed in the open shed has not done so well as usual, as, do what we would, we could not prevent its being the favourite pleasure ground of moles, and the very porosity of the materials of the bed baffled us and our traps in attempts at catching them. It is very singular how one man will catch moles and rats, &c., and another man will be unsuccessful, though setting his traps equally carefully, and so like the successful trapper that no difference can be seen, unless in the result. We believe that the difference is chiefly to be traced to the taint left behind one person being stronger than that from another, and traps that leave behind them much of the smell of the hand are next to useless.

Tainted Water.—We are much obliged to "Mincey," page 467, for telling us how to let the frogs get out of the tank, by having a slanting piece of wood at the corner. We have no doubt that "Mincey" has found the plan effectual, and there may be something in the flat piece of board, which we will try; but hitherto we found that they did not come up on the round trunk of a small tree in a similar manner. When we could manage to keep a few of those great friends of the gardener, cats at liberty, we lost some in our tanks, before we placed this round pole or tree at a corner. After that, besides the wetting, when the cat plunged in after her prey, she received no further injury, but mounted the pole as a matter of course. We value the hint of "Mincey" all the more, as frogs are friends to us, rather than enemies, just as the splendid-eyed toad is, and which, besides, is warm-blooded enough to be extremely sensible of kindness.

FRUIT GARDEN.

Proceeded in favourable weather with a little pruning. Have some Gooseberries under nets, until we have time to tie up, and whiten the bushes. As stated last week, we have been forced to thin the tomtits bullfinches, and sparrows. If the tomtit would only keep to the Larch trees, &c., in the woods now, and would come to us when the bloom-buds had unfolded, we would be thorough friends, for then after that he would be one of our best helps in looking after caterpillars and insects, and we would not begrudge him in the autumn a piece of even our best Pears and Apples, but if let alone, he and the bullfinch will clear the fruit-buds now, so that nothing for fruit will be left. As soon as we can, we will syringe limewash on all our bush and pyramidal trees, as so long as the white colour remains, it acts as a protection, though all the acidity of the lime has departed.

The hard frost furnishes a good chance for preparing for new plantations if deferred thus long. Removed a good portion of our Strawberries in pots into the orchard-houses, where the air will be quiet and still, though cold in severe frost. Those left standing in beds on hard ground are covered up with litter in frosty nights. Not a root has as yet been injured. A very little litter saves plants that thus stand on the ground, as the heat in the unfrozen ground beneath comes to their relief. Long littery dung from which the droppings have been shaken out, answers very well, but clean straw is better, and can be more easily put off and on. Other matters much as in previous weeks' notices.

ORNAMENTAL DEPARTMENT.

The frost and snow have put a stop to most out-door work; but before they came considerable time was spent in cleaning up lawns, and brushing and rolling walks. The most of our tender plants, besides Cinerarias and Calceolarias, have now been moved where a little dry heat can be given in cold, frosty, or damp weather. Cinerarias will keep and grow well in cold frames, from which the frost is merely excluded; but they will not bloom well in winter without a warmer and a drier atmosphere. To save smoking for insects, the great point is to supply a cool moist atmosphere and a damp standing place. In greenhouses and conservatories the chief matters now to be attended to, as alluded to in the notices for previous weeks, are making the plants safe; but, provided safety is secured, allowing the temperature to fall in severe weather rather than raising it immediately with fire heat; the second is giving no more water than is absolutely necessary, and not spilling a drop on the floor or stage that can be avoided; and thirdly, the giving air in severe weather, chiefly at the top of the house, and then not more than is necessary, taking care to give that

early, and then never so much at a time that the cold air outside will at once strike on the plants without being mellowed first by the warmer air of the house. Much will also depend on the leaves and everything about the plants being kept clean.—R. F.

COVENT GARDEN MARKET.—DECEMBER 23.

THERE is no change here, supply and demand much as usual.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples ½ sieve	2	6 to 4	0		
Apricots doz.	0	0	0		
Cherries lb.	0	0	0		
Chestnuts bush.	8	0	14	0	
Currants ½ sieve	0	0	0		
Black doz.	0	0	0		
Figs doz.	0	0	0		
Filberts lb.	1	0	0		
Cobs lb.	1	0	0		
Gooseberries quart	0	0	0		
Grapes, Hothouse. lb.	3	0	0		
Lemons 100	8	0	12	0	
Melons each	2	0	to 3	0	
Nectarines doz.	0	0	0		
Oranges 100	5	0	10	0	
Peaches doz.	0	0	0		
Pears (dessert) doz.	2	0	4	0	
Pine Apples lb.	4	0	6	0	
Plums ½ sieve	0	0	0		
Quinces doz.	2	0	5	0	
Raspberries lb.	0	0	0		
Strawberries lb.	0	0	0		
Walnuts bush.	10	0	15	0	
do. per 100	1	0	1	5	

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes doz.	0	0	to 0		
Beans, Kidney 100	0	0	3	0	
Beet, Red doz.	2	0	8	0	
Broccoli bundle	0	6	1	6	
Brns. Sprouts ½ sieve	2	0	2	6	
Cabbage doz.	1	4	2	0	
Capicums 100	2	0	3	0	
Carrots bunch	0	6	0	8	
Cauliflower doz.	3	0	6	0	
Coleary bundle	1	0	1	6	
Cucumbers each	1	0	2	0	
pickling doz.	2	0	0		
Endive doz.	1	0	0		
Fennel bunch	0	3	0		
Garlic lb.	0	8	0		
Herbs bunch	0	8	0		
Horseradish bundle	2	6	4	0	
Leeks bunch	0	8	to 0		
Lettuce per score	1	0	1	6	
Mushrooms pot	2	0	8	0	
Mustard & Cress, punnet	0	2	0		
Onions per bushel	3	0	5	0	
Parsley per sieve	4	0	5	0	
Parsnips doz.	0	9	1	6	
Potatoes bushel	3	6	5	0	
Kidney doz.	3	6	5	0	
Radishes doz. bunches	1	0	1	6	
Rhubarb bundle	0	0	0		
Savoy doz.	0	9	1	6	
Sea-kale basket	0	0	3	0	
Shallots lb.	0	8	0		
Spinach bushel	4	0	5	0	
Tomatoes per doz.	2	0	3	0	
Turnips bunch	0	4	0		

TRADE CATALOGUES RECEIVED.

Archibald Henderson, Sion Nursery, White Horse Road, Thornton Heath, Croydon.—*Descriptive and Priced Catalogue of General Nursery Stock.*

Sutton & Sons, Reading.—*Suttons' Amateurs' Guide and Spring Catalogue for 1868.*

James Backhouse & Son, York.—*Catalogue of Hardy Trees and Shrubs, including Conifers.*

TO CORRESPONDENTS.

* * We request that no one will write privately to the departmental writers of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

BACK NUMBERS (J. R.).—You can have the two numbers you mention if you enclose eight postage stamps, with your address, and specify again the numbers you require.

BOOKS (T. D.).—You can have both Mr. Pearson's and Mr. Thomson's volumes from our office. Of the other work we know nothing.

FIRST BOTANIC GARDEN IN ENGLAND (A. H. of B.).—The earliest was that of Oxford, founded in 1632.

STONELESS FRUIT (Pauline C. H.).—Your young friend could not have weighed the meaning of the word when she said that she "vouches the truth" of Cherry trees bearing stoneless fruit if they are deprived of their pith. It is not true, but is one of the many preposterous errors believed in former days, when the suggestions of the imagination were as much regarded as are now the decisions of experiment.

BURNING SULPHUR (G. S.).—We would never practise this in a vine or peachery, though the trees were at rest. The sulphurous acid formed by the burning is so rapidly absorbed by moist bodies that we should fear fatal results to the buds. Your Pear is the March Bergamot.

SKIRWORTS.—"Can you tell me what Skirworts are? An old gazetteer speaking of Pontefract, says it is 'a town situated in a rich soil, and is

noted for large plantations of Liquorice and Skirverts.—FAIRY FOOTSTEPS.—[The best answer we can give is the following extract from old Gerard's "Herbal":—"Called in Spanish *Cherina*, in Italian *Sisaro*, in French *Cheruy*, in English Skirret and Skirwort. And this is that Siser or Skirret which Tiberius the Emperour commanded to be conveyed vnto him from Gulduba, a castle about the river of Rhene, as Pliny reporteth."]

ROSES (*Dr. Dixon*).—Of the two Roses you name we should select William Griffith.

ZONAL PELARGONIUM "AURANTIA STRIATA."—"P." wishes to know where this variety, mentioned at page 458, can be obtained.

FRUIT ROOM (*Haleyon*).—A very good fruit room would be a lean-to house from 16 to 20 feet in length, 12 feet in width, 10 or 12 feet high at back, and 6 feet in front. The sloping roof should be double, or straw-stuffed between the ceiling and slates, and have two ventilators on it, capped to let out vapour but prevent damp finding its way in. The front wall, especially, should be hollow, and there should be ventilators above the floor level, secured by slides to keep cold out. Trellised shelves should be placed on each side of the pathway in the centre. Your cheapest way to heat a greenhouse 25 feet long would be by flue. The price of erecting it would depend entirely on the style, and on the roof being moveable or fixed. You cannot do better than look over our advertising columns.

HEAT FROM A KITCHEN FIRE (*J. T.*).—We think that as your boiler answers so effectually, a very little attention to it in the morning would enable you to dispense altogether with the heat from your kitchen boiler during the day. We presume your kitchen boiler has an open top; and if so, the pipes from it must be near the top and near the bottom, and neither above the top nor below the bottom of the boiler. Your want of heat in the return pipe to the boiler is owing to the longer pipe and the great body of water beneath it, with which it is connected. Your plan No. 1 is that most generally adopted, and would answer well but for these circumstances. If the levels were right your kitchen boiler might have saved another boiler altogether. It thus happens at times that two are not better than one. We should certainly try the second mode and connect both the flow and return from the kitchen boiler to the flow from the main boiler; but even then, when the main boiler is not working, we should expect little heat in the return.

HARDINESS OF THE AUCUBA (*A. Clapham*).—The Aucuba under glass will endure any amount of cold you can give it. The plant is quite hardy. It will retain its berries in a house from which frost is no more than excluded for a long time. The seedlings produce berries in two or three years, according to the treatment. They have berries when very young, when grown in pots, and not over-potted.

CORBEA CARDINALIS CULTURE (*Dulcibella*).—Keep it near the glass in an airy position, in a greenhouse where fire heat is only employed to keep out frost. The watering should be very moderate during the winter; give no more water than enough to keep the soil moist, and only when the soil becomes dry; at the same time the soil should not be allowed to become so dry as to cause the foliage to flag. If the soil is very wet, and remains for a long time without requiring water, the plant should be turned out of its pot, the drainage examined, and if defective, rectified. Early in March the plant may be potted, turning it out of its pot, removing the drainage and any old soil that will come away easily from the roots, picking it out carefully with a pointed piece of wood. The plant should then be placed in a pot large enough to hold the roots without cramping them. Drain well with crocks, and over these place about an inch of the rougher parts of the compost. This may consist of two-thirds sandy peat and one-third turfy loam, well mixed with one-sixth silver sand. The compost should be broken and made tolerably fine with a spade, but not sifted, and in potting the collar of the plant should be kept high in the centre of the pot, the compost being made firm about the roots. The soil must be kept moist, but avoid heavy waterings until the roots are working freely in the fresh soil, sprinkling the plant overhead through a fine rosed syringe twice daily, affording slight shade from bright sun for a fortnight after potting, and keeping rather close for that time. When the plant has become re-established, and is growing freely, admit plenty of air and give copious supplies of water, but never until required; then afford enough to run through the soil and show itself at the drainage. In June the plant, if it has grown well and filled the pot with roots, may be shifted into a pot a size larger, using the same compost as before, and be placed in a cold frame, setting the pot on coal ashes. The plant will do much better here than in a greenhouse, the lights being drawn off after a few days and kept off, except during very wet periods and in windy weather, when the lights should be tilted so as to admit air. Gentle showers will do the plant good. Towards the end of September it may be removed to the greenhouse, and have a light and airy position. In summer it will require abundance of water, and in winter it should not be allowed to suffer from the want of it, especially when flowering.

BOX EDGING PLANTING (*Walton*).—The best time to renew or replant Box edging is in March and April, but it may be done now during mild weather, and yet it should not be much cut at this season, as the frost is almost sure to brown, if not destroy it, if the winter should prove severe. We are now planting hundreds of yards per day, and to guard against injury from frost we are only trimming off the more straggling parts. The more particular parts of the grounds, such as parterre work, we shall defer until spring, when the weather is more mild, as the Box is then more neatly planted, and it is in less danger from frost.

CLEARING WALKS OF WEEDS (*Idem*).—The best plan to clear weeds from walks is to dissolve 4 lbs. of arsenic in twelve gallons of water, and boil the liquid, keeping it well stirred, and adding 8 lbs. of crushed soda when it boils. Keep the solution boiling five minutes, then add thirty gallons of water, and stir well. Apply this to the walks in dry weather from March to May with a rose watering pot, the above quantity being sufficient for 100 square yards. It should be applied hot. A board should be placed against grass or Box edgings, one edge resting on the gravel; and the board thus set on its edge should incline towards the walk, so as to throw any water falling on the board on to the walk. The liquid should not be allowed to reach Box edgings or grass, and ought to be applied in dry weather only.

PEACH TREE PROPAGATION (*H. N. O.*).—Peaches are sometimes propagated by grafting, but the most general mode of propagation is budding, that being performed in July, or when the stocks are in condition to run—that is, when the inner bark readily separates from the albumen, and

the buds rise freely from the shoot. Care should be taken that wood buds only are used, as when fruit buds are employed failure is certain. The best stocks are of the Mussel Plum, but the White Pear Plum is sometimes employed, and upon it the buds take more freely than most other stocks, but the Peach trees are often seen outgrowing the stock. Your inquiry is about grafting, therefore we will confine our remarks to that. For grafting we would recommend the Almond stock; after one or two years' growth from the time the seed germinates, it may be grafted in March. Care should be taken to select for scions shoots having firm, well-ripened, short-jointed wood, taking them off with 1 inch of the two-year-old wood at the lower end. They should be cut in spring before they commence growth, and should be kept with their ends in moist sand until the sap of the stock begins to ascend, which will be when their wood buds begin to grow. The scion should be trimmed as for whip grafting, which is what we recommend. Leave about half an inch of the two-year-old wood at the lower extremity of the scion, and take care that the inner bark of stock and scion do not overlap each other at the lower end, or the result may be a projection liable to gum. The scion should be tied on in the usual way and clayed. The taking of the grafts may be assisted by earthing up as high as the top of the clay.

VARIATION (*Idem*).—There is not, that we are aware, any secret mode of producing variation, nor are we aware that any one has yet converted the dark leaves of the Perilla into white, and we do not believe that the gardener in your neighbourhood can do so any more than that he can make a black man white. Those in possession of secrets are always glad to part from them for one or other of the considerations you name. Secrets rarely long remain secrets where they in reality exist. They longest exist in the imagination.

PRUNING PLUM AND APPLE TREES NEWLY PLANTED (*Idem*).—The small shoots 6 or 7 inches long, we presume, are upon the principal shoots, and should be cut back to within half an inch of their base; but if they are shoots required for training they ought not to be shortened. All the leading shoots, i.e. those with which the wall is to be covered in part, should not be shortened, but be trained in at their full length except the central shoot, which ought to be cut back to within 12 inches of the place whence it took its rise.

INARCHING BLACK HAMBURGH ON ROYAL MUSCADINE VINE (*Idem*).—The safest time to do it is when both have commenced growth, so that the danger of bleeding will be less. It may be done as soon as both have leaves. A smooth part of the stem of the stock, and as near the bottom of the rafter as possible, ought to be chosen, and a thin slice of wood, about 1½ inch long, removed. You need not take it off deeper than the breadth of the shoot or cane of the Vine to be inarched upon it, from which a similar slice of wood should be taken with a sharp knife, and below the uppermost shoot. If the parts of both fit exactly, both the edges touching each other, all well; but if not, you must make their barks both meet on one side, and lie closely together. You must then make in the stock a slanting cut downwards, and another slanting cut upwards in the Vine to be inarched, about half through the latter, and three quarters of an inch in length, and introduce this into the slanting cut in the stock; both the cuts being of an equal length, the bark corresponding on one if not on both sides of the cut in the stock. Bind the stock then together neatly with a strip of bast matting; cover with a little clay or grafting wax, so as to exclude air; and over this place a thin bandage of moss tied on with matting. You will prepare the Black Hamburgh for inarching by pruning it now to the required length, leaving two good eyes above where you intend inarching. The Black Hamburgh should be treated in every respect as if it were for growth, being well watered, &c. In six weeks after the operation the ligature and grafting clay or wax may be removed, and you will doubtless have attained the desired object. The union should be slightly bandaged, and when the Black Hamburgh grows freely you may cut the cane immediately below the junction, or tie a piece of string very tightly around the cane of the Black Hamburgh, just below the union, and let it grow a month or six weeks longer, then cut it away. The best of the shoots on the Black Hamburgh, if more than one be left above the point of inarching, should be trained up the rafter and have every encouragement, the others, if any, being cut away. If you can find a young shoot on the stem well disposed for the operation, you may work upon it, otherwise the Black Hamburgh will take on the central rod of the Royal Muscadine. You may allow the Royal Muscadine to carry a full crop, and when gathered cut the Vine away to the union of the Black Hamburgh with it. The Hamburgh will bear Grapes in the following year, so that you will not lose a single year. What influence the stock may have upon the Hamburgh, we cannot tell.

TRANSPLANTING PAMPAS GRASS (*R. O. B. L.*).—We have removed large plants early in April, taking up each with a good ball, preparing a good-sized hole, and planting with some good rich compost. The plants should be well watered after planting, and during dry weather throughout the summer. Thus treated they have generally done well, but some have suffered from the removal for some time; still there have not been any failures. The Pampas Grass succeeds best in moist ground, but we cannot say that it is improved by planting near water. We had some, however, on gravelly ground through which water passed in the underlying strata, and they were very fine.

DALE'S CONQUEROR CUCUMBER (*Moweroft*).—You can obtain the seed of this Cucumber through almost any seedsman.

PELAGONIUM CUTTINGS (*Idem*).—You can commence striking cuttings as early in spring as you can procure them of sufficient length; March or the beginning of April is a good time. The best time to strike cuttings for bedding purposes is in August and the beginning of September. Cuttings struck then are in every way better than those put in during the spring.

LABELS FOR A PINETUM (*Mitchell Henry*).—As these are required to be stuck in the ground, and large, we recommend them to be of wood, cut in the shape of the letter T; the end to be thrust into the ground charred, the whole painted white, and the name painted black on the face of the upper part.

CHRYSANTHEMUM CUTTINGS (*Inquirer*).—Chrysanthemum cuttings do exceedingly well put in during January if they have the benefit of a mild bottom heat; but if you cannot give them heat we would advise you to take off the dwarfest of the young shoots with a portion of root to each, and pot them in singly small pots. They succeed admirably if kept in a house from which frost is excluded, or they will do in a cold frame,

protection being afforded. If you keep them for a time after potting in the house, remove them to a cold frame before they become drawn up weakly, giving abundance of air in mild periods, with slight protection when the weather is severe. The pots should be plunged in coal ashes.

NAMES OF PLANTS (*J. T. R.*).—1, Cedar of Lebanon; 2, *Cedrus deodara*; 3, *Juniperus recurva*; 4, *Taxus elegantissima*. (*A Seedling*).—It is quite impossible to name plants from such a specimen. It may be a *Begonia*, or it may be a seedling of one of a dozen other genera.

METEOROLOGICAL OBSERVATIONS in the Suburbs of London for the Five Days ending December 22nd.

DATE.	BAROMETER.		THERMOMETER.				Wind.	Rain in inches.	GENERAL REMARKS.
			Air.		Earth.				
	Max.	Min.	Max.	Min.	1 ft. dp.	2 ft. dp.			
Wed. . 18	29.498	29.461	47	25	45	44	W.	.00	Clear; fine; masses of white clouds; clear.
Thurs. 19	29.725	29.634	47	20	44	43	N.W.	.00	Overcast, hoar frost; overcast; overcast.
Fri. . 20	29.949	29.848	38	26	43	43	W.	.00	Low fog; hoar frost; partially overcast; overcast.
Sat. . 21	29.911	29.761	50	35	44	42	S.	.13	Rain; overcast and damp; overcast and mild.
Sun. . 22	29.891	29.738	54	23	44	43	N.W.	.00	Densely overcast; partially overcast, very fine; clear.
Mean	29.783	29.692	47.20	25.80	44.00	43.00	..	0.12	

POULTRY, BEE, and HOUSEHOLD CHRONICLE.

JUDGING GAME FOWLS BY COLOUR.—No. 2.

BROWN REDS.*—In judging these, though the brown-streaked breasted birds are the favourites, it should be recollected that the red-brown breasted, whether brown-streaked, or clear reddish-brown breasted, are the pure bred birds; that any black markings or streaks on the breasts of the Brown Reds are bad, as showing the Black-breasted Red cross, and that the birds are less spirited and not pure bred; also, that only the red-brown breasted birds are the most spirited strain of the colour, pale breasts being less spirited. The Ginger Brown Reds are not pure bred, being crossed with the Gingers and Ginger Red Game. It should likewise be remembered, that Brown Red hens should be of a pencilled dark brown colour with dark red hackles, and not black with yellow hackles. Brown Reds, and Duckwings also, have often been too much crossed with the Black-breasted Reds and other colours to be pure bred enough for cup and prize takers. All the lighter-coloured Brown Reds are inferior birds, and the dark Brown Reds are the true type of the colour, and the only prize strain. All throated-breasted birds with breasts marbled with black, and all black-streaked breasted birds are inferior. The streaks should be dark brown and not black, as given erroneously in the "Standard of Excellence," the proper colour of breast being denoted by the name, "Brown-breasted Dark Reds," or "Red Brown-breasted Dark Reds," which is the true and correct appellation of the Brown Reds.

In **PILES** the brightest and reddest-coloured birds are the best, if red-eyed and white-legged. Red-eyed yellow-legged stand next; and red-eyed, yellowish-willow-legged, third. No others are very good. The red eye is absolutely essential. The red-eyed, white-legged breed is the hardest, best, and fastest-fighting Pile of all, and is white-skinned, and as such, better than any yellow-skinned bird, like the yellow and willow-legged (the "Standard of Excellence" puts the white-legged third, which is wrong), though these are often redder birds when red-eyed, than the white-legged, which are almost always red-eyed. Yellow-eyed Piles are weaker and are nearly always spiritless birds. Red feathers in the tails of Piles show goodness, I think, though any black feathers, such as the old Worcester-shire Piles had, is very objectionable. The breasts should be well marbled with red in the cocks, and well streaked or veined with red in the hens, as better than white breasts which show softness.

DUCKWINGS are either Birchen Grey, Yellow Birchen, or Silver Grey, the last the purest bred, the first colour being between the two extremes, and the most common colour of the red-eyed, willow-legged prize breed. Any red, brown, or yellow markings in the hens are objectionable; they should be of a pure bluish silver-grey, more or less silvered according to the strain. The red-backed Duckwing cocks are cross-bred birds from the Red breeds, and are never pure bred Duckwing Game. A coarse red salmon-brick breast is a great defect in Duckwing hens, and shows the Red cross in them very plainly. In a pure-bred bird the hen's breast should be of a delicate

pale or silvery fawn colour, instead of a red fawn, which last colour is proper only for Partridge hens. The white-skinned, blue and white-legged Duckwings incline most to the Silver-Grey colour; and the yellow-skinned, willow and yellow-legged birds to be Yellow Birehens, the yellow-legged birds being the true Yellow Birchen Duckwings. The red eye, however, inclines them to both grey and reddish feathers, and the yellow eye to the yellow feathers only. The pure white-legged Silver Duckwings and Mealy Greys have the rare pearl-grey eye. The "old Yellows" were produced before the "old Silvers," which latter were more difficult to produce.

All Duckwings were originally bred from various Black-breasted Reds, though some breeders and writers term them an original breed. Some prefer Silver Duckwings, and some the high-coloured yellow birds; the middle colour, the Birchen Grey Duckwing, is most common.

The **BLACK-BREASTED RED** is most common of all, and varies most in its strains, which are more numerous than any colour shows. Of legs, they have all colours, and when with the true red eye, in this breed really good birds may be found with any colour of leg. The only two necessary points as to colour in the cocks are, that they must be bright red, neither light or pale, nor dark or dull, and have the red eyes, without which eye all strains are inferior. The hen should be of a rich red partridge-brown colour; hackle reddish-gold or golden red (the redder the better for spirit), with dark stripes in most strains, but not in all of them.

In **WHITE GAME** the red eye and white leg are essential, as giving the pure white colour. The "Standard of Excellence" gives yellow legs, but birds with these always incline to a yellow tinge and are not so game as the red-eyed, white-legged Whites are, though if red-eyed, they are better than the yellow or daw-eyed Whites.

BLACK GAME should, of course, be black-eyed and blackish-legged. Bluish-black is the best tinge for the legs, the blacker the better. The yellow-eyed Blacks are poor. Cocks black or brassy; hens always entire black. White-skinned better than yellow-skinned.

DARK GREYS and **DARK BIRCHENS** (dark combs), should be grey in the cocks in the Greys, and dusky yellow or birchen in the Birehens. Hens very dark in both sorts, and marked much alike with grey and birchen. Legs and eyes quite jet black in both sorts, or as black as possible. Greys are the better of these two sister sorts and harder.

GINGER REDS.—Cocks red-breasted; red combs and faces; eyes red. Combs and face never gipsy as in Brown Reds. Legs white, yellow, or yellowish-willow. Hen light ginger partridge colour.

GINGERS are lighter and yellower than the preceding. They should have yellow eyes. The cock and hen should both be ginger-breasted, never gipsy in face, but red. The "Standard of Excellence" gives the Ginger Brown Red as the true Ginger Red, which is quite a mistake. Gingers' legs should be yellow or light willow.

In **RED DUNS**, for good birds, red eyes are essential, but many have yellow eyes and legs. White-legged birds are best; blue-legged next. These are the only two red-eyed strains, and are true Red Duns, the yellow-eyed birds being the true Ginger Blues.

BLUE DUNS when pure bred are blue dun-coloured with yellow eyes and legs in the case of the hens; cocks often

* Light nails are the most common defect in our breeds of Brown Reds.

birchen above, blue under. Blue cocks are rare. The eyes and legs should be the same as the hen's.—NEWMARKET.

MY POULTRY YARD.—No. 2.

My first thorough-bred birds were some Silver-pencilled Hamburgs, a cock and two hens. These were bred from prize strains, and were good birds. I received them in January, and the account which I kept of the eggs they laid me in twelve months was as follows:—

January	13	August	24
February	32	September	11
March	40	October	3
April	27	November	0
May	42	December	2
June	41		
July	35	Total	270

One hen wanted to sit, so I unadvisedly placed under her eleven eggs; but she only sat on them three days, and then deserted them, so I never again put a Hamburg to sit. I found that the eggs of my Hamburgs that I hatched produced weakly chickens, so I purchased a cock of another strain; but still my Hamburg chickens did not do well. I placed them on fresh runs, and adopted various plans to improve their health; but one by one my chickens died off.

I then thought I would try a cross for table fowls, and bought two Black Red Game hens, and let them run with my Silver-pencilled Hamburg cock. This time my trouble was repaid, for every egg from the Game hens brought forth a strong healthy chick, which grew and did well. Of course they never made large fowls, but they answered very well for the table, though they had blue legs, but I did not mind that. The chickens from this cross used to be generally black and white speckled, as if enveloped with cobwebs. They had rather long blue legs and long tails, and were very precocious. A curious result was, that the chickens, with one or two exceptions, were cocks. Have any of your readers ever heard that an egg with a rough shell at the smallest end produces a cock? I have; but I do not say I believe in it. Nevertheless, strange to say, nearly every one of my Game hens' eggs had this rough-ended shell.

The hens I bred from the above-named cross (only two), did sit; but it was very badly.

I kept this breed two or three years, but gave it up eventually, as my birds would roam, and, besides, the eggs and chickens were very small.

I attributed my not rearing the Hamburg chicks to the clay soil; but to those who want fowls for beauty, and have a dry run, and who do not mind small eggs, I can with every confidence recommend the Pencilled Hamburgs; and if it is desired to cross them, try a Game hen, provided rather small chicks are not objected to, and the result will be a good, hardy, fast-growing cross.

The next fowls which I tried were White Dorkings. These I had from a celebrated breeder. I had a cock and two hens of this breed. My number of eggs for one year from them was as follows:—

January	0	August	37
February	28	September	19
March	44	October	5
April	35	November	0
May	23	December	0
June	21		
July	42	Total	264

So my two White Dorkings laid six eggs less than the Hamburgs, both varieties having the same amount of food, and the same kind—viz., whole best barley once a day, ground oats twice.

I had no better luck with my young Dorking chicks than I had with my Hamburgs—all the young ones died; so I bought fresh hens from one place, and a fresh cock from another place.

My chicks had the best of food and the greatest care; but still I saw them dying before me. I was truly put out, and said to myself, "I shall never do anything in the poultry way." I read books and thus obtained some information about the soil; again my clay soil was the cause.

I could not alter the soil, so I thought I had better alter the breed, and then I bought some Grey Dorkings, thinking they would be harder than their white brethren; but again I was doomed to disappointment.

Next time I tried Spanish; but there I was completely beaten, for my old birds died as well as my young ones, although every imaginable care was taken of them. My cold,

bleak situation and damp clay soil seemed to undermine my Spanish fowls' constitutions, and slowly they all faded away. So again I found that clay soil would not suit the Spanish breed.

I then thought of trying the French breeds, so I bought some Crève Cœur eggs and—began again.—R. S. S. W.

TROUBLES OF A NEW FARM.

"WELL, now, really Frank, why should we not have a little farm of our own? Of what use is this rambling old manor house with its innumerable out-buildings, if they stand empty? We had better have lived on in the town, than have tried to make a town house in the country."

"A farm, indeed! Make ducks and drakes of your money; is that what you intend to do, Mrs. Weston?"

"No, I intend to have cows, and pigs, and geese, and ducks, and poultry."

"Your cows will die of rinderpest, and your pigs never grow fat. Your geese will fly away over the wood to the canal, and be picked up by the boatmen. Your little ducks will be drowned in the pond, or stick fast in the sides all among the mud. And your poultry will cost far more than they return, and probably be all cleared out some dark night when you are off to a party."

"I must take my chance. I like the sound of living things about me. Nothing sooner make a strange place feel home-like than the crowing of cocks, and the quacking of ducks."

"They are an intolerable nuisance. I would rather have the noise and bustle of Market Street."

"They would lessen the solitude of this quiet, and if there is any profit to be had, why should I not go in for it?"

"You will miss the profit, Sophy, because you do not understand such matters. They were not a part of your education."

"I suppose I can learn."

"You will learn how to lose your money; and then, too, it is a hobby fit only for men and boys."

"I do not agree with you. On the contrary, I often think a man would look better, and might spend his time and strength better, among sheep and cattle, than eggs and chickens. A woman is busier often, every minute being employed, and she has little opportunity for such things—at least, in the way of hobby making; not that she is unfitted. In former times the farmer never thought of meddling with poultry, it was beneath his notice, and belonged to his 'women folk.'"

"Then why did not the 'women folk' keep it in their own hands? Few of them appear to care for such matters now; even those who are wanting something to fill up their time."

"Perhaps they were turned away from it in their young years, told it was neither proper nor profitable."

"There, there, do as you like, only do not trouble me with your losses. But I would strongly advise you to hire some one to take the entire management of them."

"Indeed! Frank, would you? How much wiser should I be at the end of any given time? It would be all loss then, and no mistake, without the gain of experience. Keep a henwife for my poultry, who would, probably, if I dared to feed the chicks, ask me, as Mamma's cook did, when she mixed up the Christmas pudding, 'whose the kitchen was?' No, I will try what I can do with Martha's help; at least, in the bird way."

"Then your best plan would be to buy two broody hens, and a few eggs of a right good sort; the hens would settle down during the hatching period, and then, however far they might wander, would be sure to come back for the sake of their chickens, which otherwise might be lost in the long grass of the wood."

"And be the spring and summer without eggs. No, the first market-day I will go into the town and buy a lot; atock my farm. I will take Wilson with me to see I do not buy old birds for young ones."

"You may safely trust Wilson with cows and pigs, but as for other things I do not believe he could tell a goose from a gander."

A few days afterwards there was a great arrival to the house in the wood. A cow, two pigs, geese, ducks, and poultry. What was to be done with them? The cow and pigs had their appointed houses free from intrusion. The man had taken care of that, they were to be in his charge; but no one had thought of the birds. The fowl-house was full of rubbish and garden tools, but nothing in the way of perches; and then what was to be done with the ducks and geese?

"Let them all out of their hampers into the unused stable,"

said Mr. Weston, "for night is coming on, and in the morning you can sort them at your leisure."

So the hampers were opened, and out flew the birds, more than a score of them, "and never a pullet among them," said the matronly nurse as she stood by. They were a mixture and intermixture of many kinds. There were heavy Dorkings, and light graceful Hamburgs, and Game of such splendid form and plumage as to have satisfied even a "NEWMARKET." There were birds with large rosy combs, and others with no combs at all; huge clumsy Cochins, trailing their unsightly leg-feathers in the dirt; and one melancholy Spanish, all alone in its black coat, eyed with disgust some Light Brahmas.

"Are they not fine, Frank?" inquired Mrs. Weston.

"They are of all nations, yet not of all ages. I do not believe you have a young one among them."

"They assured me they were all young."

"That Cochlin is as old as Methuselah, just look at its spurs. You have spent your money badly. More than half your fowls are of the non-laying kind, so you will not be troubled with many eggs. And, then, I would have confined myself to one or two kinds of nearly equal weight; that little Bolton Grey will be trodden to death before night, or if it be not, it will go off into the woods to-morrow, and never come back; and those slow, lazy Brahmas will be very easy game for the fox."

"The Brahmas will sit, so I can have chickens."

Poor Mrs. Weston became alarmed as week after week passed, and there were no eggs; she could not understand it; she had been wont to think, like many others, that poultry-keeping was all profit, that eggs cost nothing. The amount of barley and meal her large family consumed, was really frightful, and far into April there was no return; she began to be afraid lest they were, as her husband laughingly asserted, all of the non-laying kind, or that their ages were, indeed, so far "unknown" as to render it highly improbable they should ever desire to increase their numbers. Hour after hour did she spend searching for eggs, peering into every corner likely and unlikely, thrusting her hands into any hole there might chance to be in the haystacks, for she had heard say that hens often took a fancy to lay there; and then, weary with her fruitless seeking, she would comfort herself with the thought there would be a great find some day, they must be laying and were hiding their eggs.

And, then, to make matters worse, the cow fell sick, and the hind came to ask what he should do, what sort of medicine he should give her? He did not think she ailed much, was only pining after company, and strongly advised buying another cow. "What, to keep the sick one company? That will never do, Wilson," said Mrs. Weston, "we have had very little good of her yet. I must have some return for my money before I venture on future speculations. Do the best you can for her, or even send for a doctor, but no more cow buying."

Then the pigs would not eat, and Martha said something was wrong, they ought to eat all up before they had any more given, and their trough was never empty, and could not be scalded out without making great waste, so the poor pigs were put upon a short allowance, and a few days afterwards one was found dead by the side of its empty trough. Wilson said, "pined to death."

Putting all things, the loss of money, the extra work, and the worry together, Mrs. Weston began to wish she had left farming to those who understood it.

The geese, too, caused great anxiety, though they had hatched their eggs without more loss than usually occurs in a strange place. Yet they had taken to a wandering life, and roamed through the wood two miles away, to a pond deeper than the one set apart for their use, and as there was no certainty of their return, Wilson had his work to leave, often the feeding of the pigs, or the milking of the cow, to drive home the vagrants.

Then, the ducks, Martha said, had eaten their heads off times without number, they were the biggest gluttons she ever saw. Three meals a-day they would have, or there was no peace. Up they came from the water to the kitchen-door, quack-quacking, with their dreadful noise, loud enough to wake the seven sleepers. Cook said it "was awful, just as though they were gnawing her," and their loud voices were never hushed until the oats in the bin were lessened, and that in no small degree. The ducks had been laying for some time before the important event was known, but from choice, or the want of a suitable nest, or from having been allowed to go out too early in the morning, they dropped their eggs in the long grass, or deposited them in the soft mud at the side of the pond. Heavy

rain swelling, the waters carried half the eggs away, and those left were spoiled for every purpose.

One more folly Mr. Weston said his wife committed. Fearing that the green peas would be ready for use, and no young ducks to be had at her new farm, she invested 10s. in the same number of month-old ducklings. They were taken great care of, had an inclosure of their own free from danger; but one unlucky morning the gate was left open, and unobserved they made their escape. Away they went picking up worms and slugs, never pausing in their journey, until they reached the gleaming waters of a pond, bright beneath the June sun, and where three Honen Ducks were bathing their metallic feathers. A low twitter of delight, and in went the young ducks. The Rouens had held the pond in their sole possession for many weeks, and would have no intruders, so a dreadful attack was made upon the little ones; they were dragged under the water and held there until drowned. Four of them were saved by the man who chanced to be near at the time, and though they grew up, and were heavy and fat, they were dear ducks at the best.

But by this time, the hens had commenced laying, and the egg-basket, if not very heavy, at least supplied home needs. After a time chickens were hatched, and then excitement seemed to culminate, for Mrs. Weston left her dinner to have the chickens brought into the house to have their bills dipped in water, otherwise they would not know how to eat, and so could not live. The young birds were very easily taken from their much too quiet Brahma mother, who, if she grieved for their loss, soon found consolation in a new nest fuller of eggs than her own had been. A Silver-pencilled Hamburg, too, seeking a safe place to deposit her daily treasure, found a warm, soft nest, and cooing over it nestled down with delight; a minute afterwards she was roughly seized by a servant-maid, who rushed with her into the house, exclaiming "This must be the right one ma'am, for there is no other on the nest," and the little Bolton Grey was put, to her great astonishment, upon the kitchen hearth, to mother ten real barn-door chickens; but the hen had no liking for the duties of a foster mother, no maternal cares ever ruffled her silky feathers, or troubled the peace of her long laying season; so with a rush and a loud scream she made good her escape to the open air and sunshine. Out went the maid again to search for the real mother, followed by her mistress; though they searched for hours, the hen could not be found, and the chickens had to be put into a hamper kept by the kitchen fire, and fed with little tiny bits, and made to drink three or four times a-day, whether they wished to do so or no. Now and then they fared only indifferently, when domestic cares accumulated. Their life was not the best even of its kind, Martha said, "There was one comfort, it could not be a long one." Neither was it, for they missed, what to them was more than food—air, space, and sunshine. Mrs. Weston seldom returned from a few days' absence, without finding one or more of her chickens dead, and the few who existed through their hamper life, were puny, and dwarfed, and spiritless; easily driven away by younger, though stronger chickens. Many more broods there were during the season, but the young birds were never again stolen from the nest, for no one at the new farm wished to repeat the experiment of rearing chickens without a mother. So Nature was left to work her own way, if not much aided, not hindered in her progress.

When autumn was far advanced, Mrs. Weston sat down in the bitterness of a, to her, heavy loss, to look over her books, to count up expenditure and return. It was not so much the loss of money as of success, the failure of a plan on which she had fixed her mind, and into which she had entered without thought, and without experience, and without that natural taste which often supplies the place of experience. Her cow had died during the summer, though not of rinderpest. They had heard its moanings all through the night, and Wilson had sat up with it, but though a good nurse he could not save it. His own idea was, it died longing for company. The one pig also was little over the weight of the two at the time of purchase, and could make no appearance at Christmas time. Her geese had not flown away over the wood, but they had wandered through it, a nuisance to their neighbours up at the Hall. And then, too, they had attained a certain size and weight beyond which they would not go, and at which they would not remain, but grew less and lighter as the weeks passed, until in despair they were disposed of at a loss. Then the ducks had been of no use, save that of ornamenting the pond in which they spent most of their time, certainly of no profit, for the few eggs saved from their carelessness would not cover the loss of the young ducklings whose death they had caused. The poultry, too, which

Wilson had chosen for their beautiful feathers, and for which he had paid a great price, were to be sold to make way for younger and more valuable birds; but Wilson found he could only get 1s. each, just about a fourth of what he had given. So they were to be kept for home consumption. Cook said, "They were too aged for any purpose, unless it was making gravy for chickens." So there was nothing but selling them at the low price, or giving them away.

Thus ended the first year of farming at the house in the wood, the result of which Mrs. Weston would never tell even to her husband.—MAUD.

MANCHESTER POULTRY SHOW.

WITH a prize schedule so good as that issued by the Messrs. Jennison, of Belle Vue Gardens, Manchester, there could not be the slightest doubt of this being a most successful show, many of the highest prizes amounting to as much as £10 each. We need scarcely refer to the excellence of the arrangements, they being precisely those of former years. The poultry, except a few Bantams, and the Pigeons, were all shown in a single tier; and as the large hall in which the Exhibition took place is certainly the best building we know in the kingdom for the diffusion of light, and is admirably warmed, the most anxious amateur could be in no fear of the wellbeing of his poultry. A fact in connection with the feeding is here worth mentioning, as showing beyond question the best plan that can be adopted in such cases. Prior to the admission of a single pen of fowls a large quantity of steamed brown bread (baked expressly for the poultry), was in readiness, and this served as the first meal after travelling. We allude to this thus expressly, to contrast it with the reprehensible practice so frequently adopted by managers of poultry shows—that of giving a first meal of hard corn, which, from temporary hunger, being eaten to excess, has to our knowledge, in several instances, utterly ruined some of the best pens ever exhibited. It cannot, therefore, be too strongly insisted upon that the first meal after a journey should be exclusively of soft food.

The *Dorking* classes were unexceptionably good, none but birds of the very highest class having the slightest chance in so keen a competition. Admiral Hornby won in the adult single cock class with one of the largest specimens we have seen for some years, the Duke of Newcastle pressing him very closely with a much younger specimen shown in most excellent condition. The Duke of Newcastle also exhibited some very excellent Rose-combed Dorkings, for which a class was specially provided, and took the first prize. Of White Dorkings there was only a limited entry, and certainly we have often seen better.

In the *Spanish* classes the old birds were mostly sadly wanting in condition, but the chicken classes absolutely abounded with the best of specimens. We very deeply regretted to notice that a cockerel of this breed, exhibited with a pullet, was ruined for ever by his companions, one of the pullets actually tearing to pieces and eating a large portion of each earlobe before her cannibal propensity was discovered, and as even rendering the circumstance more vexatious, this was one of the very best Spanish cockerels we have seen for many years.

The *Cochins* were undoubtedly a leading feature, Messrs. Mapplebeck, Tudman, and White being among the principal winners. *Brahmas* were good, but the dark-feathered birds were not quite so perfect as we anticipated. The *Polish* fowls were shown in well-filled classes, and in exquisite feather. In the classes for French fowls, *Cerve Cœurs* were the winners of the cup given expressly to these varieties. *La Flèche* being the breed next best shown; but the *Houdans* seem of late scarcely to maintain the size and weight necessary for fowls exhibited as a breed expressly for table-purposes.

The Duke of Newcastle, Mr. Fletcher, of Manchester, and Mr. C. Challoner, of Workson, were the most successful of the *Game* exhibitors. The classes were all good, and the competition severe.

The show of *Turkeys* and *Geese* has never been surpassed.

The Exhibition was very much improved by the display of Doves and ornamental waterfowl, which now, as during the several prior meetings, Messrs. Jennison have so very abundantly supplied; Mandarins, Garganics, Carolinas, Pintails, Shovellers, Brent Geese, White-fronted Wild Geese, Egyptian Geese, Barnacle Geese, Shell Ducks, and about a dozen varieties of foreign Doves, being among the most popular and attractive features of the Show. We can safely add, it is impossible to imagine birds shown in higher condition than these were, and yet they were evidently fair specimens taken at random from the very large collection with which the extensive Belle Vue Gardens abound.

The Show was well and fashionably attended, and the courtesy to every visitor displayed by the Messrs. Jennison deserves our highest praise, and was evidently appreciated.

DORKING (Coloured, except Silver-Grey).—*Cock*.—First, Admiral Hornby, Knowsley, Prescot. Second, Duke of Newcastle, Clumber. Third, J. Robinson, Vale House, Garstang. Fourth, T. Statter, Stood, Whitefield, Manchester. Highly Commended, A. Potts, Chester; D. Parsons, Cuden, near Preston; J. Siebel, Timperley. Commended, J. Fox, St. Bees, Cumberland; Messrs. Gunson & Jefferson, Whitehaven. *Hens*.—First, Mrs. F. S. Arkwright, Etwell Hall, Derby. Second, Mrs. J. H. Roper, Barham, near Ipswich. Third, J. White, Warlaby, Northallerton.

Highly Commended, A. Potts; T. Statter; J. Fox; Admiral W. Hornby. Commended, Duke of Newcastle; Mrs. Dale, Scarborough.

DORKING (Coloured, except Silver-Grey).—*Chickens*.—First, Admiral W. Hornby. Second, Mrs. F. S. Arkwright. Third, D. C. Campbell, M.D., Brentwood, Essex. Fourth, Duke of Newcastle, Highly Commended, D. C. Campbell, M.D.; Hon. H. W. Fitzwilliam, Rotherham; Rev. G. Hustler, Stillingfleet Vicarage, York. *Pullets*.—First, Mrs. F. S. Arkwright. Second, Hon. H. W. Fitzwilliam. Third, J. White. Highly Commended, Mrs. F. S. Arkwright; Duke of Newcastle; Hon. H. W. Fitzwilliam.

DORKING (Rose-combed).—First, Duke of Newcastle. Second, C. Cork, New Shoreham.

DORKING (Silver-Grey).—*Cock*.—First, Miss Miloe, Otterburn, Kelso, N.B. Second, R. D. Holt, Orrest Head, Windermere. Highly Commended, T. Raines, Bridge Haugh, Stirling. *Hens*.—First, T. Raines. Second, W. E. George, Downside, near Bristol. Highly Commended, T. Raines; D. Parsons; Rev. E. S. Tiddeman, Brentwood; T. L. Jackson, Langholm, N.B.; Miss Milne.

DORKING (White).—First and Third, H. Lingwood, Needham Market. Second, D. Parsons.

EXTRA DORKING PRIZES.—First, R. Smalley, Lancaster. Second, Hon. W. C. Fitzwilliam, Rotherham. Third, Messrs. Gunson & Jefferson. Highly Commended, R. Davies, Chester; J. Anderson, Meigle, N.B.; Hon. H. W. Fitzwilliam; Admiral W. Hornby. Commended, T. L. Jackson; Hon. W. C. Fitzwilliam.

SPANISH.—*Cock*.—First, H. Lane. Second, R. Teebay, Fulwood, near Preston. Third, J. C. Wilson, Annan, Dumfries. Fourth, H. Lingwood, Buckleshaw, Suffolk. Commended, Messrs. Burch & Boulter, Sheffield; W. P. Bull, Newport Pagnell. *Hens*.—First, Messrs. Burch & Boulter. Second, E. Brown. Third, H. Lane. Highly Commended, P. Eden, Salford; A. Heath, Calne; J. Siebel.

SPANISH.—*Chickens*.—First and Second, R. Teebay. Third, H. Lane. Fourth, F. James, Peckham Pye, Surrey. Highly Commended, E. Comber, Myddleton Hall, Warrington; Hon. Miss D. Pennant, Penrhyn Castle, Bangor; F. James. *Pullets*.—First, H. Lane. Second, E. Brown, Sheffield. Highly Commended, Hon. Miss D. Pennant. Commended, J. C. Wilson.

EXTRA SPANISH PRIZES.—First, First, H. Lane. Second, R. Davies. Third, R. Teebay. Highly Commended, J. Holme, Knowsley, Prescot. Commended, E. Brown.

COCHIN CHINA (Cinnamon and Buff).—*Cock*.—First, R. White, Sheffield. Second, C. W. Brierley, Heywood, Lancashire. Third, H. Mapplebeck, Woodfield, near Birmingham. Fourth, R. Richardson, West Gorton, Manchester. Highly Commended, W. A. Taylor, Manchester. Commended, E. C. Stretch, Ormskirk; W. Cople, Eccleston, Prescot; J. Lee, Middleton, near Manchester; H. Tomlinson. *Hens*.—First and Third, H. Mapplebeck. Second, W. A. Taylor. Highly Commended, C. W. Brierley; A. D. Shafto, Brancepeth Rectory, Durham; T. Bott, Woodlands, Bury. Commended, T. Boncher, Birmingham; G. Fell, Warrington; H. Tomlinson.

COCHIN CHINA (Cinnamon and Buff).—*Chickens*.—First, C. W. Brierley. Second, C. Sidgwick, Keighley. Third, Mrs. R. White. Fourth, H. Mapplebeck. Highly Commended, G. A. Crewe, Etwell, Derby. *Pullets*.—First, C. W. Brierley. Second, Mrs. R. White. Highly Commended, A. H. H. Lattey, Shrewley, near Warwick. Commended, H. Wade, Birmingham.

EXTRA PRIZES FOR COCHIN CHINA (Cinnamon and Buff).—First, Hon. Miss D. Pennant. Second, C. W. Brierley. Third, J. Armadale, Norton, Yorkshire. Commended, Messrs. Gunson & Jefferson.

COCHIN CHINA (Brown and Partridge-feathered).—*Cock*.—First, R. White, Sheffield. Second, A. O. Worthington, Burton-on-Trent. Third, H. Lingwood. Highly Commended, E. Tudman, Whitechurch, Salop; C. G. W. Macpherson, Bracknell. *Hens*.—First, C. W. Brierley. Second, E. Tudman. Third, E. C. Stretch. Highly Commended, C. W. Brierley; W. Bankes, Runcorn, Cheshire. Commended, T. Bott; W. Bankes.

COCHIN CHINA (Brown and Partridge-feathered).—*Chickens*.—First and Second, E. Tudman. Third, W. A. Taylor. Highly Commended, J. Horrocks, Tonge, near Manchester. *Pullets*.—First, C. Sidgwick. Second, E. Tudman. Highly Commended, J. Horrocks.

COCHIN CHINA (White).—*Cock*.—First and Second, W. Dawson, Hopton, Yorkshire. Highly Commended, A. O. Worthington. *Hens*.—First, A. O. Worthington. Second, A. H. Verity, Northenden.

EXTRA COCHIN CHINA PRIZES.—First, C. W. Brierley. Second, R. Teebay. Third, R. Smalley. Commended, J. Holme.

BRAMA POOTRA (Dark).—First, R. White. Second, H. Lacy, Hebden Bridge. Third, A. H. Verity.

BRAMA POOTRA (Light).—First, J. Pares, Postford, Guildford. Second, A. O. Worthington. Third, F. Crook, Forest Hill, Kent.

BRAMA POOTRA (either variety).—*Cock*.—First, Second, and Third, Hon. Miss D. Pennant. Highly Commended, Mrs. Hart, Alderwasley, Derbyshire; J. Stevens, Macclesfield; A. H. Verity; H. Lacy; T. Statter, jun. Commended, C. G. W. Macpherson. *Pullets*.—First, H. Lacy. Second, W. Hargreaves, Baepn, Lancashire.

POLISH FOWL (Any variety).—*Cock*.—First, C. W. Brierley. Second, G. C. Adkins, The Lightwoods, near Birmingham. Highly Commended, G. C. Adkins; T. Walsley, Chester; H. Beldon, Bigley, Yorkshire; Mrs. E. Procter, Hull. *Hens*.—First, G. C. Adkins. Second, P. Unsworth, Sandy Lane, Loughton, near Warrington. Highly Commended, T. Walsley; H. Beldon; C. W. Brierley; Mrs. E. Procter. *Chickens*.—First and Third, P. Unsworth. Second, R. Charlesworth, Manchester. Commended, G. C. Adkins; J. A. Taylor.

GREY COEUS.—First and Cup, Col. Stuart Wortley, Grove End Road, London. Second and Third, W. Blinkhorn, Waterdale, St. Helen's. Highly Commended, Col. Stuart Wortley.

HONAN.—First, National Poultry Company, East Bromley, Kent. Second, Col. Stuart Wortley. Highly Commended, E. Brown, Sheffield.

LA FLECHE.—First, Col. Stuart Wortley. Second, Hon. W. C. W. Fitzwilliam. Commended, Hon. W. C. W. Fitzwilliam.

GAME (Black-breasted Reds).—First, E. Aykroyd, Bradford, Yorkshire. Second, J. Fletcher, Stoneclough, Manchester. Third, J. H. Wilson. Highly Commended, S. Matthew, Stowmarket.

GAME (Black-breasted Reds).—*Cock*.—First, C. W. Brierley. Second, H. M. Julian, Hull. Third, J. Fletcher. Highly Commended, G. R. Smith, Scarborough; Rev. T. O'Grady, Hognaston Vicarage, Ashbourne; W. J. Mellor, Colwick Rectory, Nottingham. Commended, S. J. Astbury, Encliffe, Manchester. *Chickens*.—First and Third, C. Chaloner, Workson. Second, J. Fletcher. Fourth, Duke of Newcastle. Highly Commended,

C. Chaloner; W. Parker, Clay Cross, Derbyshire. Commended, C. Chaloner; J. D. Newsome, Batley; G. W. Hay, Sudbury, Derbyshire.

GAME (Black-breasted and other Reds).—*Hens*.—First, E. Aykroyd. Second, T. Whewell, Irwell Bank, Radcliffe. Third, J. Barrow, jun. Highly Commended, T. Statter; J. Holme; Rev. W. J. Mellor. *Pullets*.—First, G. W. Hay. Second, J. Bury, Manchester. Third, C. W. Brierley. Highly Commended, Rev. W. J. Mellor; A. Darby, Bridgenorth, Salop; W. Whewell; M. W. Stobart, Darlington; T. Dyson, Halifax; W. J. Cope, Barnsley, Yorkshire. Commended, T. Dyson.

GAME (Brown and other Reds, except Black-breasted).—First, J. Wood, Wigan. Second, C. W. Brierley. Third, Messrs. Church & Holding, Nantwich, Cheshire. Commended, Rev. W. J. Mellor.

GAME (Brown and other Reds, except Black-breasted).—*Cock*.—First, J. Wood. Second, Duke of Newcastle. Third, C. Chaloner. Highly Commended, J. Barrow, jun., Bradley Field, near Kendal. *Chickens*.—First, J. Anderson. Second, C. Chaloner. Third, S. Matthew. Fourth, J. Wood. Highly Commended, J. Holme; F. Sales, Crowle; Messrs. Church & Holding. Commended, J. Folds, Barton Lane, near Barnsley.

EXTRA PRIZES FOR GAME (Black-breasted and other Reds).—First, R. Pashley, Harness Grove, Workop. Second, S. Matthew. Third, P. West, Abrah, near Wigan. Fourth, J. Wood. Highly Commended, J. Barrow, jun.; E. Aykroyd. Commended, J. Williams, Pentre, North Wales.

GAME (Duckwings, and other Greys and Blues).—First, S. Matthew. Second, J. Halsall, Ince, near Wigan. Third, H. M. Julian. Highly Commended, G. R. Smith; A. K. Briggs, Bradford. Commended, Mrs. Norbury, Bowdon Priory, Cheshire.

GAME (Duckwings, and other Greys and Blues).—*Chickens*.—First, J. Halsall. Second, J. Fletcher. Third, Rev. T. O'Grady. Highly Commended, P. Ashcroft, Golborne, near Newton-le-Willows; E. Aykroyd. *Hens*.—First, J. D. Newsome. Second, J. Halsall. Highly Commended, Rev. W. J. Mellor; R. Pashley. Commended, A. K. Briggs.

GAME (White and Piles).—First, R. Butcher. Second, R. Swift, Southwell, Notts. Highly Commended, H. C. Musters, Ashbourne. *Chickens*.—First, R. Butcher. Second, Rev. F. Watson.

GAME (Black and Brassy-winged).—First, Rev. W. J. Mellor. Second, J. Pares.

GAME (Any variety, except Black-breasted and other Reds).—*Cock*.—First, Duke of Newcastle. Second, F. Sales. *Hens*.—First, J. Halsall. Second, R. Pashley. Highly Commended, Messrs. Furness & Rhodes. Acerington. Commended, R. Butcher.

DUCK AND DRAKE (Rouen).—First, T. Burns. Second, T. Burgess. Third, E. H. Pilling, Gatefield, Wrexham. Fourth, J. Anderson. Highly Commended, E. Leach, Rochdale; T. Burns; T. Statter; T. Eveleigh, Little Lever, Bolton-le-Moors; S. H. Stott. Commended, T. Wakefield, Golborne; C. A. Aekers, Bickershaw, near Wigan; D. Hardie, Sorbie, N.B.; E. Longton, Woolton, near Liverpool.

DUCKS (Rouen).—First, E. Leech. Second, S. H. Stott. Third, E. Longton. Commended, T. Burns.

DUCK AND DRAKE (White Aylesbury).—First and Third, Mrs. M. Seamons, Aylesbury. Second, E. Leech. Highly Commended, D. Hardie.

DUCKS (White Aylesbury).—First, E. Leech. Second, Mrs. M. Seamons.

DUCKS (Black East Indian).—First and Second, Rev. W. Sergeantson, Acton Burnell, Shrewsbury. Commended, Messrs. Furness & Rhodes.

DUCKS (Any variety).—First, E. Leech. Second, T. Bott (Rouen). Third, D. Parsons. Highly Commended, T. C. Harrison, Hull; R. Leech, jun.; D. Parsons; Messrs. Gunson & Jefferson; T. Statter, jun. (Wild Ducks). Commended, T. Wakefield; P. Ashcroft (Rouen); T. Houliker.

ORNAMENTAL WATER FOWL.—First and Second, J. Jennison (Mandarins and Carolinas). Third, S. A. Wyllie, East Moulsey, Surrey (Mandarins). Highly Commended, T. C. Harrison; S. A. Wyllie (Carolinas); J. Jennison (Carolinas, Garganey, Pintail, Brent, and Barnacle Geese). Commended, J. Jennison (Mandarins, Shoveller, and Wildgeese).

GEES (White).—First, S. H. Stott. Second, R. Leech, jun. Third, T. Statter, jun. Highly Commended, Messrs. J. & W. Rostron, Levenshulme; Mrs. M. Seamons; J. J. Stott; Rev. G. Hustler.

GEES (Grey and Mottled).—First, Rev. G. Hustler. Second, S. H. Stott. Third, J. J. Stott. Highly Commended, Miss H. Walker. Commended, Miss H. Walker.

TURKEYS.—First, Mrs. Dale. Second, J. Smith. Third, R. Leech, jun. Very Highly Commended, F. E. Richardson, Bramshall, Uttoxeter. Highly Commended, R. Leech, jun.; C. Barnett, Blackenhall, Nantwich; C. P. Aekers. *Pullets*.—First and Second, J. Smith. Third, F. E. Richardson. Highly Commended, R. Leech, jun.; T. Statter. Commended, S. H. Stott.

EXTRA STOCK (Any variety not before named).—First and Second, National Poultry Company (Guelndres and Pas du Chaminis). Third, Rev. A. G. Brooke, Ruyton XI. Towns, Salop.

HAMBURGH (Black).—*Cock*.—First, C. Sidgwick. Second, J. Robinson. *Hens*.—First, J. Jackson, Bury. Second, G. Lingard, jun. Highly Commended, C. Sidgwick; J. Munn, Fern Hill, Stacksteads; J. Lancashire, Chadderton, near Manchester. Commended, J. Clegg, jun., High Compton, Oldham. *Chickens*.—First, Rev. W. Sergeantson. Second, C. Sidgwick. Third, J. Lancashire. Highly Commended, W. Mason; G. Lingard, jun.; T. Wrigley, Tongue, Middleton.

HAMBURGH (Golden-spangled).—*Cock*.—First, J. Roe. Second, W. A. Hyde, Hurst, Ashton-under-Lyne. Third, Messrs. Hay & Bray, Ogley Gress, Holmfirth. *Chickens*.—First, N. Marlor, Deuton, near Manchester. Second, J. Wild, Ashton-under-Lyne. Third, T. Scholes, Thompson Lane, near Hollinwood.

HAMBURGH (Silver-spangled).—*Cock*.—First, J. Fielding, Newchurch, near Manchester. Second, T. Sharples. Third, H. Beldon. *Chickens*.—First and Second, J. Fielding. Third, J. Lancashire.

HAMBURGH (Spangled).—*Hens* or *Pullets*.—First, J. Roe. Second, J. Ogden, Deuton Lane, Hollinwood. Third, N. Marlor. Highly Commended, J. Ogden; J. Fielding; W. E. George; W. A. Hyde. Commended, J. Wild.

HAMBURGH (Golden-pencilled).—*Cock*.—First, T. Wrigley, jun. Second, J. Robinson, Garstang. Third, F. D. Mort, Stafford. *Chickens*.—First, Messrs. Burch & Boulter. Second, T. Wrigley, jun. Third, T. Huddleston.

HAMBURGH (Silver-pencilled).—*Cock*.—Prize, T. Sharples, Rawtenstall. *Chickens*.—Prize, T. Sharples.

HAMBURGH (Pencilled).—*Hens*.—First, F. D. Mort. Second, T. Wrigley, jun.

EXTRA PRIZE FOR HAMBURGH.—First, N. Marlor. Second, J. Field.

Ing. Third, J. Roe. Highly Commended, W. Painter, Abram, near Wigau; C. W. Brierley. Commended, T. Scholes.

GAME BANTAMS (Black-breasted Reds).—*Chickens*.—First, J. W. Morris. Second, Miss E. A. Crawford, Farnsfield, Notts. Third, H. Shumach, Southwell, Notts. Fourth, W. Parker. Highly Commended, J. J. Cousins, Chapel Allerton, near Leeds; J. W. Morris; G. W. Hay. Commended, E. H. Pilling; J. W. Morris.

GAME BANTAMS (Brown and other Reds).—*Chickens*.—First, Miss E. A. Crawford. Second, T. Dyson. Third, D. Parsons. Commended, Miss E. A. Crawford.

GAME BANTAMS (Any variety except Black-breasted and other Reds).—First and Second, H. Shumach. Third, J. J. Cousins. Highly Commended, J. Hilton; J. Crossland, jun.

GAME BANTAMS (Black-breasted Reds).—*Cock*.—First, Messrs. Furness & Rhodes. Second, J. Halsall. Third, W. P. Entwistle. Fourth, J. A. Taylor. Highly Commended, Rev. W. J. Mellor; F. J. Asbury; H. Shumach; C. W. Brierley. Commended, J. W. Morris; W. Parker; J. Bury; Rev. W. J. Mellor; J. Bamforth; Messrs. Furness & Rhodes.

GAME BANTAM (Any variety except Black-breasted Reds).—*Cock*.—First, J. Crossland, jun. Second, H. Shumach. Third, J. Wright.

GAME BANTAM (Black-breasted and other Reds).—*Hens*.—First, J. W. Morris. Second, J. R. Robinson. Highly Commended, Rev. W. J. Mellor; H. Shumach. Commended, F. W. Entwistle.

GAME BANTAM (Any variety except Black-breasted and other Reds).—*Hens*.—First, J. R. Robinson. Second, R. Swift. Commended, Rev. W. J. Mellor.

EXTRA PRIZES FOR GAME BANTAMS (Any variety).—First, J. W. Morris. Second, H. Shumach. Third, Rev. E. S. Tiddeman. Highly Commended, R. Gerrard. Commended, J. Anderson; G. R. Davies; R. Gerrard.

BANTAMS (Any variety except Game).—First, A. K. Briggs (Black). Second, W. J. Cope (Pekin). Third, H. Ashton. Highly Commended, T. Burgess. Commended, J. W. Morris; T. C. Harrison; W. Mason.

PIGEONS.

POUTERS (Any colour).—*Cock*.—First, A. H. Stewart, Birmingham. Second and Highly Commended, W. Harvey, Sheffield. *Hens*.—First, A. Heath, Calne, Wiltshire. Second, A. H. Stewart. Highly Commended, A. H. Stewart; W. Harvey.

CARRIERS (Black).—*Cock*.—First, F. Crossley, Elland, Yorkshire. Second, T. Colley, Sheffield. Highly Commended, E. E. M. Roys, Greenhill, Rochdale. *Hens*.—First, W. Hargreaves, Buncup, Lancashire. Second, E. E. M. Roys.

CARRIERS (Any colour except Black).—*Cock*.—First, T. Colley (Blue). Second, Capt. Manguall, Styal, Cheshire. Highly Commended, W. Hargreaves. Commended, T. Colley. *Hens*.—First, T. Colley (Blue). Second, E. E. M. Roys.

CARRIERS.—*Young*.—First and Third, F. J. Maclaren, Highfield, Pendlebury. Second, H. Mapplebeck, Woodfield, Mossley, Birmingham.

DRAGOONS (Yellow).—First and Second, C. Bulpin, Riverside, Bridge-water. Commended, T. H. Ridpath, Rusholme.

DRAGOONS (Any other colour).—First, A. Lowe, Over Hulton, near Bolton. Second, W. Harvey. Highly Commended, J. W. Edge, Birmingham; H. Yardley, Market Hall, Birmingham.

ANTWERPS.—First, C. Bulpin. Second, S. A. Taylor, Sutton Coldfield, Birmingham. Highly Commended, J. Thompson, Bingley; R. Anthonson, Hazel Grove, near Stockport; T. Newell, Ashton-under-Lyne; S. A. Taylor. Commended, J. O. Allen, Smedley, near Manchester.

JACOBS.—First, J. B. Pinder, Harpurley. Second, J. Hawley, Bingley, Yorkshire. Highly Commended, J. Thompson; Capt. Manguall; T. H. Ridpath; C. Bulpin; T. Newell. Commended, R. Thompson, Kendal.

BARS.—First and Second, J. Gell, York. Highly Commended, J. Gell; Messrs. Maclure & Redford, Newall Green, Timperley. Commended, J. Gell.

FANTAILS.—First and Second, H. Yardley. Highly Commended, S. A. Wyllie, East Moulsey, Surrey; J. W. Edge. Commended, F. Crossley; J. Bailly, jun., Mount Street, Grosvenor Square, London.

TUMBLERS (Almond).—First, F. Key, Beverley, Yorkshire. Second, J. Fielding, jun., Rochdale.

TUMBLERS (Mottles, Agates, Kites, or Self-coloured).—First, A. H. Stewart. Second, J. Fielding, jun. Highly Commended, W. Leyland.

TUMBLERS (Beards, Balts, or any other variety of Tumblers not before named).—First, W. H. C. Oates, Beshorpe, Newark. Second, E. E. M. Roys. Highly Commended, J. Gooden, Hale, near Altrincham; J. H. Slack, Manchester; J. Fielding, jun.

NUNS.—First and Second, C. Bulpin.

TURBITS.—First, J. Thompson. Second, C. Bulpin. Highly Commended, H. Mapplebeck. Commended, Capt. Manguall; H. Yardley.

OWLS (Blue and Silver English Owls).—First and Second, C. Bulpin. Very Highly Commended, J. Gooden. Commended, J. Gooden; A. Lowe.

OWLS (Foreign).—First, Countess of Derby, Knowsley Hall, Prescot. Second, J. Fielding, jun. Highly Commended, F. Crossley; J. Fielding, jun.

KUNTS.—First and Second, T. D. Green, Saffron Walden. Highly Commended, J. Bailly, jun.

TRUMPETERS.—Prize, W. H. C. Oates.

ANY OTHER VARIETY OF PIGEON NOT BEFORE NAMED.—First and Second, J. Bailly, jun. (German Toy and Egyptian Swifts). Third, W. H. C. Oates (Ice Pigeons). Highly Commended, T. Martin, Chorlton Road, Manchester (Magpies); S. A. Wyllie (German Toy); J. Hawley (Black Swallows); H. Yardley; J. Bailly, jun. (German Toy). Commended, T. H. Frean, Liverpool (Brunswick).

DOVES (Any variety).—First, Second, Highly Commended, and Commended, J. Jennison, Manchester (Barbary, Canadian, Green-winged, Stock, and Ring-necked).

RABBITS.

BLACK AND WHITE.—First, G. Lindley, Sheffield. Second, M. Millington, York.

YELLOW AND WHITE.—Second, F. B. Donisthorpe, Leicester.

TORTOISESHILL.—First, M. Millington. Second, G. F. Jones, York.

BLUE AND WHITE.—First and Second, M. Millington.

SELF-COLOUR.—First, W. Green, Ardwick. Second, M. Millington.

LONGEST EARS.—Prize, M. Millington.

ANORA.—Prize, T. Schofield, jun., Castlemere, Rochdale.

FOREIGN RABBITS.—Prize, W. H. Easton, Hull.

JUDGES.—*Dorkings*, *Spanish*, *Cochins*, *Brahmas*, and *Crève Coeurs*:

Mr. Edward Hewitt, Sparkbrook, Birmingham; Mr. W. B. Tegetmeier. *Game, Game Bantams, &c.*: Mr. R. Teebay, Fulwood, Preston; Mr. S. Fielding, Trentham. *Hamburgs, Polands, Ducks, &c.*: Mr. J. Dixon, North Park, Bradford; Mr. Martin, Linton Park, Staplehurst, Kent. *Pigeons*: Mr. Harrison Weir, Peckham, London; Mr. T. J. Cottle, Cheltenham. *Rabbits*: Mr. H. Yardley, Market Hall, Birmingham.

NEWPORT (MONMOUTHSHIRE) POULTRY SHOW.

THE Tredegar Exhibition of Poultry and Pigeons, in conjunction with one of cattle and sheep, took place on the 17th and 18th inst., in the Cattle Market, Newport, which is well adapted for a large Show. The arrangements for the poultry, and the punctuality with which they were carried out, gave general satisfaction.

In some of the classes the quality of the birds could not be excelled, while in others good pens were the exception. Of *Game*, a pen of excellent Brown-breasted Reds won the piece of plate. They were excellent birds, shown in faultless condition, though hard pressed by the Black-breasted Reds shown by the Rev. G. S. Cruwys. The prizes for *Game*, any other variety, were won by Duckwings, in all cases, but the birds were not equal to the Reds in point of merit, and several pens in both classes had exceedingly bad feet and rough legs.

Spanish upheld the credit of the Show, so near Bristol; scarcely a pen but deserved the piece of plate, which was won in this class by a perfect pen from Aldwick Court. The cock was a remarkably fine bird, combining the fine properties of a perfect Spanish fowl with the sprightliness and agility of a Bantam.

In *Dorkings*, one of the best pens was disqualified in consequence of there being a string round the leg of the cock. Throughout the class, so bad were the feet of the cocks that it was with difficulty that a pen was found to receive the award, though as a rule the birds were in all other respects good.

The *Cochins* in both classes were good, and it may almost be said, that the fine pen of Buff shown by Mr. Taylor was equally deserving with the pen of Partridge, to which the cup was given. The first prize pen of *Brahmas* was of great merit. There were some perfect *Hamburgs* shown. The cup being given to a remarkably fine pen of Silver-spangled, the property of Mr. Beldon, the cock being one of the noblest specimens that has ever been seen, and the hen of exquisite beauty. In *Polands*, the first prize went to Silvers, and the second to Blacks. The French fowls were well represented by *Crève Cœur*, *La Flèche*, and *Houdan*.

Game Bantams formed a very large class, and some of the pens were of the highest quality. Black and White Bantams were most excellent, numbering nineteen pens of the highest merit, and it would have been easy to have distributed a dozen prizes instead of two. One of the most beautiful Black cockerels was altogether thrown out of competition by being penned with a hen with legs almost white. The piece of plate was awarded to the splendid pen of Blacks shown by Mr. Davies, and they well deserved their position, though they had no mean competitors for the honors in the Sebrights, shown by the same gentleman, and the beautiful pen of *Game* shown by the Rev. A. Kingscote Cornwall.

For any other distinct breed, the first prize went to Black Hamburgs, the property of Mr. R. H. Nicholas, the cock being of great merit, and devoid of the Spanish legginess generally found in this breed.

Ducks were poor, with the exception of the pen of East Indian, winners of the first prize in the "Any other variety" class. The *Turkeys* were good, especially the first prize pen.

In the selling class most breeds were represented. The first prize was awarded to an excellent pen of *Crève Cœur*, which were claimed immediately on the opening of the Show, the second and third prizes going respectively to Black *Polands* and *Dorkings*.

The *Pigeon* classes did not produce any great amount of competition, though in this department the winners were such as may not be easily beaten at any show.

GAME (Black or Brown-breasted Reds).—Cup and First, J. W. Jones, Newport. Second, G. S. Cruwys, Crawys Moorhead, Tiverton, Devon. Highly Commended, H. Beldon, Bingley, Yorkshire; J. Fletcher, Stoneclough, near Manchester.

GAME (Any other variety).—First, W. Dunning, Newport, Salop. Second and Third, G. Cole, Llanelly.

SPANISH.—Cup and First, J. R. Rodbard, Aldwick Court, Wington, near Bristol. Second, J. Walker, Wolverhampton. Third, H. Beldon. Highly Commended, J. Newton, Silsden, near Leeds; Hon. Miss Douglas Pennant, Penrhyn Castle, Bangor; Messrs. H. & S. Cooper, Walsall, Staffordshire. Commended, J. Logan, Nantydeny, near Pontypool.

DORKINGS (Coloured).—Plate and First, Mrs. G. Canning, Hartpury, near Gloucester. Second, J. Pulley, jun., Lower Eaton, Hereford. Third, Col. C. Lyne, Brynhyfryd, Newport, Mon. Highly Commended, J. Pulley, jun.

COCHIN-CHINA (Coloured).—Cup and First, J. R. Rodbard. Second, W. A. Taylor, Manchester. Highly Commended, Hon. Miss Douglas Pennant. Commended, E. Shaw, Plas Wilnot, Oswestry; H. Hobson, Walsall, Staffordshire.

COCHIN-CHINA (White).—First, H. Hobson, Walsall, Staffordshire. Second, F. D. Johnson, Birmingham. Highly Commended, J. Gardiner, Bristol. Commended, Mrs. Blay, The Poplars, Gregory's Bank, Worcester.

BRAHMA POOTRAS.—First, Hon. Miss Douglas Pennant. Second, W. B. Etches, Whitechurch, Salop.

HAMBURGERS (Gold-pencilled).—First, H. Beldon. Second, W. E. C. Currie, Clepshaw. Highly Commended, T. Griffiths, Merthyr Tydfil. Commended, Col. C. Lyne.

HAMBURGERS (Silver-pencilled).—First, J. Platt, Bolton, Lancashire. Second, H. Beldon. Highly Commended, Mrs. Jeremiah, Nantydeny, near Pontypool.

HAMBURGERS (Gold-spangled).—First, H. Beldon. Second, J. Newton. Highly Commended, J. Ogden, Hollinwood, Manchester; T. Walker, jun., Denton, near Manchester. Commended, J. Ogden; T. May, Wolverhampton.

HAMBURGERS (Silver-spangled).—Cup and First, H. Beldon. Second, W. A. Taylor. Highly Commended, J. M. Kilvert, Ludlow. Commended, C. Harris.

POLANDS (Any variety).—First, H. Beldon. Second, W. C. Gould, Gold Tops, Newport. Third, J. Percivall. Highly Commended, Mrs. Blay.

FRENCH.—First, C. Homfray, Glen Uske, near Newport (Crève Cœur). Second, Col. Stuart Wortley, Grove End Road, London. Third, Mrs. Llewellyn, Court Coleman, Bridgend (Houdans).

GAME BANTAMS.—First, Rev. A. K. Cornwall, Bencembe, Dursley. Second, W. F. Eotwisle, Leeds. Highly Commended, W. Bonteher, Nottingham Hill, London; G. W. G. Thomas, Coedriglan, Cardiff; J. J. Consins Allerton Park, Chapel Allerton, Leeds; E. Payne, The Wharf, Cardiff; J. Williams. Commended, T. Davies, Newport; E. C. Phillips; Messrs. H. & S. Cooper, Walsall, Staffordshire; J. Skinner, Maundee.

BANTAMS (Black or White Clean-legged).—Cup and First, T. Davies, Newport. Second, Miss Nicholas, Newport. Highly Commended, G. S. Cruwys; Miss J. E. Nicholas, Newport; Messrs. Tonkin & Tucker, Bristol; H. M. Maynard, Holmewood, Ryde, Isle of Wight. Commended, Miss Nicholas.

BANTAMS (Any other variety).—First, T. Davies (Sebright). Second, G. S. Cruwys (Sebright). Commended, Master R. J. Nicholas, Newport. (Sebright).

ANY OTHER DISTINCT BREED.—First and Fourth, R. H. Nicholas, (Black Hamburgs). Second, T. Walker, jun. (Black Hamburgs). Third, H. J. Evans, Brecon Old Bank, Cardiff (White Dorkings). Fifth, Dr. O. Drewry, Walsall, Staffordshire (Negro Silkies). Highly Commended, J. R. Jessop, Hull (Negroes); Mrs. Blay (Andalusians). Commended, Col. Stuart Wortley (Japanese); C. Homfray, Glen Uske, near Newport (Silkie Negroes).

SELLING CLASS.—First, C. Homfray (Crève Cœur). Second, R. H. Nicholas. Third, J. G. Holford (Dorkings). Very Highly Commended, T. Rogers, Walsall. Highly Commended, R. H. Nicholas; J. Cox (Houdans); J. M. Kilvert, Ludlow, Salop (Silver-spangled Hamburgs). Commended, J. Skinner (Dorkings).

GUINEA FOWLS.—First, T. J. Harrison, Singleton Park, Oxenholme. Second, Hon. F. C. Morgan, Ruperra Castle, near Newport.

DUCKS (Aylesbury).—First, J. Logan. Second, E. C. Phillips.

DUCKS (Rouen).—First, J. Pulley, jun., Lower Eaton. Second, S. T. Evans, Fern Hill, near Newport. Third, E. C. Evans, Infirmery, Cardiff.

DUCKS (Any other variety).—First, S. Dupe, Evereerech, Somerset (Buenos Ayres). Second, Hon. F. C. Morgan (White Muscovy). Highly Commended, C. Homfray (Muscovy). Commended, Mrs. Llewellyn, (Brazilian).

DUCKS (Selling Class).—First, J. M. Kilvert (Black East Indian). Second, E. Shaw (Rouen). Highly Commended, J. Francis, Malpas, near Newport (Rouen). Commended, S. Dupe (Rouen).

GEES.—First, J. Logan. Second, Mrs. Matthews, Crossonon, Tre-dunnock, near Llangibby.

TURKEYS.—First, Right Hon. Lord Tredegar, Tredegar Park. Second, J. Pulley. Third, Hon. F. C. Morgan. Commended, H. J. Evans; Rev. W. Corfield, Llangatock Rectory, near Abergavenny.

SWEEPSTAKES FOR SINGLE COCKS.

SPANISH.—Prize, T. Ace, Ystalyfera, near Swansea.

COCHIN-CHINA.—First, C. J. Lambert, Kingswood, near Bristol.

GAME BANTAMS.—First, E. Payne, Cardiff. Second, W. Bonteher, Nottingham Hill, London. Third, Rev. A. K. Cornwall. Highly Commended, T. Davies. Commended, T. H. Wyndham, Salisbury; J. M. Tolley, Worcester.

ANY OTHER VARIETY.—Prize, D. L. Evans (Golden-pencilled Hamburgs).

PIGEONS.

CARRIERS.—First and Second, F. F. Foster, Birmingham. Highly Commended, J. Cook, Shoreditch, London; H. M. Maynard.

POUTERS.—First, F. F. Foster. Second, J. E. Beward, Coventry. Commended, J. E. Beward; F. F. Foster; J. Cook.

TUMBLERS.—First, J. E. Beward. Second, J. Percivall. Highly Commended, F. F. Foster. Commended, J. Percivall; J. Cook.

FANTAILS.—First, J. E. Beward. Second, F. F. Foster. Highly Commended, H. M. Maynard. Commended, J. Cook; W. S. Loder, Bathwick, Bath; F. F. Foster.

ANY OTHER VARIETY.—First and Second, F. H. Middleton, Maundee, Newport. Highly Commended, J. Percivall (Bine Swallows); H. M. Maynard (Siberians). Commended, J. R. Jessop (Trumpeters); J. Brewer (Magpies); Capt. G. Williams, Newport (Skinners); W. S. Loder (Frillbacks).

The Judge was Mr. E. Hutton, Pudsey, Leeds.

LONGTOWN POULTRY SHOW.

THE following are the awards made at the fifth Show of the Longtown Association, held December 17th and 18th:—

DORKINGS.—First, M. Brookshank, Manchester. Second, D. Hardie. *Chickens*.—First, D. Hardie. Second, R. Reid.

COCHINS.—Second, R. Little. Highly Commended, M. Taylor, jun. *Chickens*.—Second, W. Bearpark. Highly Commended, J. Logan.

SPANISH.—Hen.—First and Second, Miss J. Nelson. *Chickens*.—First, Lattimer and Laidlow. Second, E. J. Musgrave.

HAMBURGERS (Golden Spangled).—First, A. Hatellie. Second, R. Dickson. Highly Commended, J. Dixon. *Chickens*.—First, R. Dickson. Second, M. J. Burrow. Highly Commended, E. J. Musgrave.

HAMBURGERS (Golden Pencilled).—First and Second, R. Burrow. Highly Commended, T. J. Harrison and G. Beatty. *Chickens*.—First and

Highly Commended, W. Bowe. Second, R. Little. Highly Commended, T. J. Harrison, J. Armstrong, and J. Little.

HAMBUROHS (Silver Spangled).—First, W. Bowe. Second, E. J. Musgrave. Highly Commended, J. Logan. *Chickens*.—First and Second, W. Bowe. Highly Commended, J. Logan.

HAMBUROHS (Silver Pencilled).—First and Second, J. Musgrave. Commended, G. Walker and J. Logan. *Chickens*.—First and Second, J. Musgrave. Highly Commended, W. Story. Commended, J. Logan.

GAME.—First, R. Fawkes. Second, A. Thompson. Highly Commended, T. Maxwell. Commended, J. J. Wilson. *Chickens*.—First, W. Bearpark. Second, A. Thompson. Highly Commended, W. Nichol, and R. Little.

GAME BANTAMS.—First, W. Scott. Second, J. Harvey. Highly Commended, D. Murray. Commended, W. Mabon and J. Davidson.

BANTAMS (Any other variety).—First, M. Little. Second, E. J. Musgrave.

GERSE.—First, R. Reid. Second, J. Graham. Highly Commended, Mrs. McBurnie. Commended, G. Graham and D. Hardie.

DUCKS (Aylesbury).—First, D. Hardie. Second Lattimer and Laidlaw.

DUCKS (Rouen).—First, D. Hardie. Second, R. Little. Commended, W. Bearpark, D. Hardie, and J. Logan.

DUCKS (Any other variety).—First, R. Robinson. Second, J. R. Paterson. Commended, T. J. Harrison and W. Story.

SELLING CLASS.—First, W. Bowe (Gold Pencilled). Second, E. Hutton (Poland).

SPECIAL PRIZES (*Game Cock*).—First, E. Aykroyd. Second, J. Brough. Third, W. Nichol. Highly Commended, T. Maxwell. *Any variety*.—*Cock and Hen* (Confined to Arduains and Kirkandrews).—First, R. Reid. Second, R. Burrow. Highly Commended, J. G. Robinson.

PIGEONS.

CROPPERS.—Second, J. Maxwell. Highly Commended, Messrs. Sibson and Hume.

NUNS.—First, T. S. Crowther. Second, A. Crosbie.

FANTAILS.—First, A. Crosbie. Second, I. Fawkes.

CARRIERS (Any other variety).—First and Second, R. Whittaker (Yellow and Almond Tumblers). Highly Commended, J. Logan (Jacobins).

SWEEPSTAKES.

HAMBUROHS.—First, J. Musgrave. Second, T. Musgrave.

GAME.—First, R. Little. Second, W. Husbands. Highly Commended, R. Burrow.

LIMERICK POULTRY SHOW.

THE annual Show of the Munster Poultry Association was held at Limerick on the 19th and 20th inst., when the following awards were made:—

DORKING (Coloured or Silver-Grey).—First, Second, and Highly Commended, Mrs. Warburton, Nans, Kildare. Commended, R. P. Williams, Glaslin, Clontarf, Dublin. *Chickens*.—First, Mrs. Warburton. Second, R. P. Williams. Highly Commended, Mrs. Warburton. Commended, Mrs. Warburton; R. P. Williams; A. E. Usher, Camphire, Cappoquin.

SPANISH.—First and Medal, R. P. Williams. Second, J. C. Cooper, Cooper Hill, Limerick. *Chickens*.—First, Miss M. Murray, Portland, Limerick. Second, F. W. Zurlhorst, Dublin. Very Highly Commended, J. C. Cooper. Highly Commended, A. Conyn, jun., Ardunaine, Glengarry, Kingstown, Dublin; R. E. Reeves, Capara Rosenthal, Mount Mellick. Commended, A. Conyn, jun.; A. W. Shaw, Rose Cottage, Limerick.

GAME (Black or Brown-breasted).—First, F. W. Zurlhorst. Second, R. Close, Kingstown, Dublin. Highly Commended and Commended, J. C. Cooper.

GAME (Any other variety).—First, F. W. Zurlhorst. Second, A. E. Allen, South Terrace, Cork (Fife). Commended, A. E. Allen (Grey).

COCHIN-CHINA (Cinnamon or Buff).—First, F. W. Zurlhorst. Second, Mrs. Hay, Spike Island, Queenstown. Commended, F. W. Zurlhorst.

COCHIN-CHINA (Brown or Partridge-leathered).—First, F. W. Zurlhorst. Second, E. Pitt, Newgate Brewery, Limerick. Commended, T. Costelloe, Farinno, Murrow, Limerick; C. F. Stanton, Cappage, Clondalkin, Dublin.

COCHIN-CHINA (White or Black).—First, A. W. Shaw. Second, F. W. Zurlhorst. Very Highly Commended, F. W. Zurlhorst. Highly Commended, Mrs. Warburton.

BRAHMA POOTRA (Dark).—First, R. W. Boyle, Galtrim House, Bray, Wicklow. Second, J. C. Cooper. Highly Commended, R. W. Boyle.

BRAHMA POOTRA (Light).—First and Second, A. W. Shaw.

MALAY.—First and Second, J. C. Cooper.

LA FLECHE.—First and Second, A. W. Shaw. Commended, J. C. Cooper.

CRANE GEESE.—First and Medal, F. W. Zurlhorst. Second, J. C. Cooper. HOUDAN.—First, A. W. Shaw. Second, F. W. Pim, Rathgar, Dublin. Very Highly Commended, Mrs. Hay. Highly Commended, J. C. Cooper. Commended, C. F. Stanton; F. W. Pim; A. W. Shaw.

POLAND (White-crested Black or Black-crested White).—First, R. P. Williams. Second, J. C. Cooper. Commended, Miss I. Shaw, Rose Cottage, Limerick.

POLAND (Golden or Silver-crested).—First, F. W. Pim. Second, J. C. Cooper. Highly Commended, R. P. Williams; J. C. Cooper. Commended, R. P. Williams; R. E. Reeves.

HAMBUROHS (Golden or Silver-pencilled).—First, F. W. Zurlhorst. Second, C. F. Stanton.

HAMBUROHS (Golden or Silver-spangled).—First, F. W. Zurlhorst. Second, J. C. Cooper. Highly Commended, R. P. Williams. Commended, S. Mowbray, Killeany, Mounttrath.

GAME BANTAMS.—First, J. C. Cooper. Second, R. E. Reeves.

BANTAMS (Any other variety).—First, Mrs. Stanton. Second, W. Corbett, Castle Connell. Highly Commended, Benson, Garryowen (Golden).

ANY VARIETY NOT BEFORE MENTIONED.—First, F. W. Zurlhorst (Sultans). Second, W. Corbett (Negro Silk). Commended, Capt. Gilbert, Killaloe, Clare (Andalusians); J. C. Cooper; Mrs. Warburton (White Guinea).

SINGLE COCKS.

DORKING (Any colour).—First, Mrs. Warburton. Second, J. C. Cooper. Highly Commended, Mrs. Warburton. Commended, Mrs. Hay; A. E. Usher.

SPANISH.—First, A. Conyn, jun. Second, A. Murray, jun., Portland, Limerick.

GAME.—First, C. F. Stanton. Second, J. C. Cooper. Highly Commended, F. W. Zurlhorst. Commended, J. Downey, Harvey's Saw Mills, Limerick.

COCHIN-CHINA.—First and Second, F. W. Zurlhorst.

BRAHMA POOTRA.—First, R. W. Boyle, Galtrim House, Bray, Wicklow. Second, Mrs. Warburton.

DUCKS (Rouen).—First, R. P. Williams. Second, F. W. Zurlhorst. Highly Commended, R. P. Williams. Commended, Mrs. Ryan, Temple Muir, Limerick; R. E. Reeves; Mrs. T. Fosbery, Kilgobbin, Limerick; Mrs. Parsons, Tervoe, Limerick; S. Mowbray.

DUCKS (White Aylesbury).—First, R. P. Williams. Second, S. F. Dickson, Barrington's Bridge, Limerick. Highly Commended, J. C. Cooper. Commended, Mrs. Warburton; A. W. Shaw.

GOSSINGS (Any colour).—Special Class.—First, Mrs. Warburton. Second, S. F. Dickson.

GERSE (White).—First, Mrs. Warburton. Second, J. C. Cooper. *Goings*.—First and Second, Mrs. Warburton.

GERSE (Grey and Mottled).—First, J. C. Cooper. Second, A. E. Usher. *Goings*.—First and Second, J. C. Cooper.

TURKEYS (Hatched in Ireland).—*Pouls*.—Special Class.—First, Capt. W. C. Hamilton, Ballitore House, Kildare. Second, D. O'Grady, Prospect, Ballaskenry, Limerick.

TURKEYS.—First, T. Hollis (Cambridge). Second, J. C. Cooper. Highly Commended, T. O'Grady (Cambridge). Commended, J. C. Cooper. *Pouls*.—First, Capt. W. C. Hamilton (American). Second, J. C. Cooper. Highly Commended and Commended, J. C. Cooper.

SELLING CLASS (Any variety).—First, A. E. Usher (Silver-Grey Dorkings). Second, R. P. Williams (Crested Gold-spangled). Third, S. Mowbray (Spanish). Highly Commended, Mrs. Webb (Aylesbury Ducks); J. C. Cooper (La Fleche). Commended, Mrs. Warburton (Silver-Grey Dorkings); R. P. Williams (Crested Silver-spangled); Capt. Gilbert (White Spanish and Andalusians); F. W. Pim (Houdans); J. C. Cooper (Crève Cœur).

SOCIETY'S PRIZE FOR MOST POINTS IN POULTRY.—J. C. Cooper.

PIGEONS.

POUTERS (Yellow).—First, R. Fulton, Deptford, London. Second, J. H. Perrott, Hayfield, Cork.

POUTERS (Mealy or any other colour).—First, J. R. Harvey, M.D., Cork (Red). Second, R. Fulton (Red). Commended, J. H. Perrott (Mealy).

POUTERS (Black Pied).—First and Medal, R. Fulton. Second, J. R. Harvey, M.D. Highly Commended, J. H. Perrott.

POUTERS (Blue Pied).—First and Cup, J. H. Perrott. Second, R. Fulton. Highly Commended, J. R. Harvey, M.D.

POUTERS (White).—First, Medal, and Very Highly Commended, R. Fulton. Second, J. R. Harvey, M.D. Highly Commended, J. H. Perrott.

CARRIERS (Black).—First and Medal, J. R. Harvey, M.D. Second, G. A. Wherland, Cork. Highly Commended, J. Hawley, Bingley. Commended, G. A. Wherland.

CARRIERS (Dun).—Medal, J. Towerson, Whitehaven, Cumberland. First, J. Hawley. Second, R. Fulton. Highly Commended, G. A. Wherland. Commended, J. R. Harvey, M.D.

CARRIERS (Blue or other colour).—Prize, R. Fulton (Blue).

TEMPLES (Short-faced Almonds).—First, Medal, and Second, R. Fulton. Highly Commended, J. Hawley. Commended, J. R. Harvey, M.D.

TEMPLES (Kites, or whole feathers).—First, R. Fulton (Kites). Second and Highly Commended, J. Hawley (Red).

TEMPLES (Dottles, or other colours).—First and Second, J. Hawley (Yellow). Commended, R. A. Blennerhassett; R. Fulton.

COMMON TEMPLES (Balds, Beards, or other colour).—First, J. W. Edge, Birmingham. Second, J. Hawley (Red Mottled). Highly Commended, H. L. Tivy, Cork (Blue). Commended, Master R. A. Blennerhassett (Yellow, Black, and Blue Balds); J. Hawley (Black Mottled); J. Russell, Limerick (Blue Balds).

COMMON TEMPLES (Ermine or Fawn-hooded).—First and Book, E. Ahern, Limerick (Fawn-hooded). Second, J. W. Edge.

BARBS (Black).—First and Second, J. H. Perrott. Commended and Medal, J. Hawley.

BARBS (Any other colour).—First, J. H. Perrott (Yellow). Second, J. Hawley (Red). Commended, Master R. A. Blennerhassett (Yellow).

JACOBINS (Red or Yellow).—First and Medal, J. Hawley (Red). Second, J. Towerson. Commended, J. H. Perrott (Yellow); J. Hawley (Yellow).

JACOBINS (Any other colour).—First, T. O'Grady (White). Second, J. Hawley.

FANTAILS (White).—First, J. Hawley. Second, T. O'Grady. Highly Commended, J. H. Perrott; Messrs. E. & J. M'Crea, Dublin. Commended, Master R. A. Blennerhassett; J. Hawley.

FANTAILS (Any other colour).—First and Commended, Master R. A. Blennerhassett (Blue). Second, J. W. Edge.

TRUMPETERS (Mottled).—First, J. H. Perrott. Second, J. Hawley.

TRUMPETERS (Any other colour).—First, Medal, and Second, J. Hawley (Black and White). Highly Commended, J. H. Perrott (Black).

OWLS (Blue or Silver).—First, J. Fielding, jun., Roehdale (Blue). Second, Master R. A. Blennerhassett (Silver). Highly Commended, Master R. A. Blennerhassett (Blue); Mrs. Warburton, Kildare (Silver).

OWLS (Any other colour).—First and Medal, J. Fielding, jun. (White). Second, J. Towerson. Commended, J. Hawley.

TURBANS.—First and Second, Master R. A. Blennerhassett (Blue). Highly Commended, Messrs. F. & J. M'Crea. Commended, J. Hawley.

NUNS.—First and Second, Master R. A. Blennerhassett.

ANY OTHER VARIETY.—First, J. R. Hawley (Isabel). Second, Master R. A. Blennerhassett (Blue Brunswick). Highly Commended, J. Hawley (Blue Spangled). Commended, Master R. A. Blennerhassett (Lace Fantails, and German Ice).

RUNTS.—Medal, J. Lloyd, Cork (Silver).

SOCIETY'S CUP, J. Hawley.

SONG AND ORNAMENTAL BIRDS.

CANARIES (Yellow Belgian).—First and Second, W. Corbett.

CANARIES (Buff Belgian).—First and Second, W. Corbett.

CANARIES (Crested or other Varieties).—First, W. Corbett (Norwich). Second, Miss F. M. M. Croker (Norwich).

GOLDFINCH MULE.—First and Second, W. Corbett. Highly Commended, T. Fitzpatrick, Limerick. Commended, J. W. Heuston, Tipperary.
LINNET MULE.—First, J. Storan, Limerick. Second and Highly Commended, T. Fitzpatrick.
NIGHTINGALE.—Prize, W. Corbett.

ORNAMENTAL WATER FOWL.—First, W. Corbett (Black Swans). Second and Highly Commended, R. P. Williams (Pintail Ducks, and Ruddy Shieldducks).

ORNAMENTAL BIRDS NOT PREVIOUSLY MENTIONED.—First and Second, W. Corbett, (Parrots, Cockatoos, Foreign Birds, &c.) Commended, Miss F. Marshall, Limerick (Parrot); F. De Courcy, Limerick (Macaw).

JUDGE.—Mr. P. Jones, Fulham, London.

NORTH BRITISH COLUMBIAN SOCIETY'S SHOW.

This was eminently successful in every department, comprising the choicest specimens of each variety, and every class was well filled by representatives from various parts of the United Kingdom. In many cases the competition was unusually close, and the task allotted to the judges was of no ordinary description, they having to select and place five pens, and no more, in each class. From this circumstance many very deserving birds necessarily had to be passed over, and it is not too much to state that in several classes every noticed bird was worthy of a first position. The arrangements of the Committee and the courteous Hon. Secretary, Mr. Ruthven, were, as they always are at Glasgow, complete and admirably carried out. The birds were shown in the circular pens of the Society, than which none is better suited for the comfort of the specimens. These were also well attended to.

The *Pouter* classes are the great feature of the Glasgow Show, the younger birds being shown in pairs, while the adults are exhibited singly according to their colours, and some idea of the extent and variety of this department may be formed when we mention that two hundred and eighty-one pens, containing three hundred and thirty-one Pouters, competed. In these classes, the Scotch fanciers—always strong, and seldom worsted except by specimens which have passed through their hands—as usual, held most of the leading positions.

The Members' Challenge Cup, value £30, second year's competition, won last year by J. Montgomery, Esq., Belfast, was gained on the present occasion by Mr. R. Fulton, of London, and the fortunate competitor in 1868 will secure possession of this coveted trophy, according to the greatest number of points in the three years' competition.

White, Black, and Blue Pouters fully maintain their positions, while the Reds exhibit no improvement in colour, but a great advance has been made in Yellows, which are now little behind in size, shape, and beauty.

Mr. George Ure's first prize fine Blue Cock deservedly took the silver medal for excellence of colour and markings, and the young White Cock belonging to the same exhibitor had a like honour for excellence of form and carriage, the former bird competing very closely for both distinctions. Mr. Haie took the medal for the best Pouter Hen in the exhibition with a beautiful White.

In the classes for young *Carriers*, Blacks and Duns, both medals were awarded to remarkably good pens, exhibited by Mr. G. C. Holt, of Lawton, Cheshire. The Blacks were of unusual excellence, and merit particular notice.

For the best pair of *Darbs* a life-sized oil Portrait, handsomely framed, the estimated value about six guineas, was offered, and brought together an excellent collection. Captain Heaton, of Manchester, was the successful exhibitor, and he was also first in the class for young birds, in each case with very fine Blacks.

Almond and Short-faced *Tumblers* were good, but not numerous.

Fantails were also good. Small, plain-headed birds won. In *Jacobs*, five Reds obtained the medal; Yellows were second, and Blacks third. *Trumpeters*, Mottled and Black, were a strong class. Mr. Montgomery's first prize pen, containing the survivor of the famous pair of Blacks imported by Mr. Baily, accompanied by a good hen, had an easy victory, although the same exhibitor and Mr. Horner exhibited fine birds. The White *Trumpeters* were not so good. In *Turbits* the smallest pair of Reds (point-crowned) we have seen for some time took the medal; and in foreign *Owls* good Whites won. Of English *Owls* several pens were entered, which had no claim to their place, but were all passed over, good Blues taking the lead, and Powder Blues being second. *Nuns*, common *Tumblers*, *Dragons*, and any other variety were good classes. We published the prize list last week.

FEEDING TURKEYS, GEESE, AND DUCKS FOR THE LONDON MARKET.

The eastern counties may be said to have pretty nearly a monopoly of our English Turkey raising and feeding. Hen-wives are generally "afraid to meddle with them" on the score of delicacy; but if the requisite food and attendance are not found to be thrown away in Norfolk, Cambridgeshire, &c., why should they be elsewhere, except in an essentially damp climate? They must be tenderly reared, and not "dragged up," as the saying is.

The Norfolk Turkey is black, with a few white spots on its wings; and in no part of the county is the breed preserved in higher purity than in Sir William Ffolkes's. The Cambridgeshire Turkey is of a bronze grey, and rather longer in the leg and bigger in the bone. Very few white ones are to be seen, as they are supposed, like a white long-horn cow, to be more delicate. The adherents of the Norfolk blacks consider that they lay on more flesh and that it is whiter and finer in texture than that of the Cambridgeshire bronze; but as a rule the latter sort predominates in the East Anglian stubbles, and comes to the greatest weight. A good April-hatched cock at Christmas should average about 18 lbs. in his feathers, and the hen-bird about 10 or 11 lbs. in November, with ordinary feeding; but if they have been "sent along" with Indian corn, barley meal, rice, and potatoes, they will make up to nearly 2 lbs. heavier. The small Norfolk farmers generally keep a cock and three or four hens, and consider fifteen an excellent brood. The best broods are always hatched in April, and the second brood, which never comes to the same maturity, and is eaten at poult estate, follows in June or July. A September hatch too often realises the rustic prophecy, "They'll never be fit, they we'n't live long enough." Cramp in the legs is very fatal to the broods; but it only kills them by lingering stages, and a disease in the head very often affects "a highly successful elimination." Wet is the young Turkey's greatest foe. They are not let out of the coop till they have been hatched two or three days, and they should then be carefully watched and driven in from a shower.

On the smaller farms they are seldom finished off for market, and middlemen go round about the end of August and buy them up at an average of £4 10s. per score. They are then sold at a small profit, of sometimes only 6d. per head, to the larger farmers to "shack" upon the barley or oat stubbles, while the "swine well ringled" are put upon the wheat ones. By the terms of some leases the Pigs and poultry are the only live stock which may be depastured on the young grass seeds layer. A turkey boy is placed in daily attendance on the flock, to drive them home, if it is wet, and keep them away from the trees, to which, true to their American forest origin, they are very partial. Nice, bright plumage, and wattles like red sealing wax, are capital symptoms, and if the cocks gobble, they are said to "talk healthy." Fighting is also a true sign of vigour, and so is fly-catching, when they are young. Besides what they get on the stubbles, they have abundance of in-door relief. The system of cramming them at night with forced balls is very much abandoned, and they are generally well kept on potatoes, barley-tailings, and light wheat, ground and mixed with milk. Common white turnips, which they eat greedily without slicing, tend to make their flesh white, and "cool their coppers;" brick-dust to scour their maw is never neglected.

They are killed simply by breaking their necks, and the breast bone is also broken before they are sent off to the poultry salesman, in order to give the breast a plumper appearance. The cocks, if sold out of their feathers to the neighbouring gentry, will fetch 1s. 2d. per lb., and the hens 1s., or sometimes only 9d., when a very plentiful season has knocked down prices, or they are not fed up to the mark. The bigger they are, the higher their value per lb., on the same principle that salmon of 20 lbs. and upwards fetch 6d. more in the spring and early summer months for the large West-end dinner parties. The great bulk of them go in their feathers to the London salesmen: but the wives of the small farmers take them picked to Norwich and sell them in the market, where very large ones, trussed and ready for the spit, have made 1s. 6d. at Christmas. Hen-birds, which get fat sooner, and are generally killed off before the end of November, are thought to be a daintier morsel than the "gobblers." Some two-year-old cocks (beyond which age they are very seldom kept) have been killed at 30 lbs., when a heavy weight is wanted for an audit dinner; but with very high feeding, in one or two rare instances, prize birds have turned the scale at 40 lbs.

It is to Norfolk and Suffolk that we look for Goose management on the largest and most economical scale. The Goose trade of the great Norfolk dealers resolves itself into two branches—the green Geese, and the Michaelmas. In March and April they begin to get in their gosling supplies from farmers or cottagers near the commons in both those counties. Most of these goslings are about five weeks old, and many of them in very poor plight; but six or seven weeks of feeding under stages, on barley meal, maize, wheat-tailings, and brewers' grains mixed make them all ripe for the green Goose market.

The Michaelmas Geese take their places under the stages in August, and Norfolk and Suffolk are pretty well scoured before the dealers fall back upon the Irish and the Dutch supplies. The Dutch, which are principally grey, come from Rotterdam, and one of the largest Norwich dealers imported 17 tons weight of live birds last year. They come over by steamers and sailing vessels, packed in big flat baskets, but not to any great extent after the 1st of October. In the dealers' hands they are fed on the same principle as Ducks—low fare to begin with, and then on a gradually ascending scale. On turnips they are capital substitutes for sheep, and when a dealer has a turnip field, he not unfrequently hurdles off a portion of it and eats it off with them. They first clear the tops and then the bulbs of the softer turnips; but when they have a field of swedes to deal with, the man in attendance gives each turnip a chop. With this aid they eat far cleaner than sheep, and, in fact, leave nothing but their "taith," which answers admirably as a preparation for the next wheat crop. Mangels are not so much to their taste as turnips, but they eat the tops with a special relish. While they are busy with these green crops they require nothing but large troughs of water, and the finishing process consists in putting them under stages for a month and feeding them on brewers' grains and meal.

On the western moors of Cornwall every one keeps Geese, and they are bought up by jobbers in thousands for the stables. Summer Court, on September 25th, is the Goose fair of the county; but they are only eaten there, and bargains are struck under their savoury influence for draft ewes and wethers. Farmers all over England are supplied very largely both from Holland and Ireland. Geese are extensively bred in Moravia; and the hilly districts in Germany and Holland are peopled by a lot of Goose farmers, who get their living entirely by them. The Hussenheim Goose market is a very large one, and of great antiquity, and, according to local tradition, the town owes its name to the bird of its choice. The Dutch hucksters buy goslings from the cotters—who, like the burghers, are remarkable for turning the penny the right way—at prices varying from 1s. 6d. to 2s. They are driven to Rotterdam, where they are packed up in crates, which are capable of holding about fifty or sixty each. Their voyage to Hull by the steamers is charged at 18s. per cwt., or about £5 for 300 or 400 birds, and they are not fed until they are landed, and then with oats. From Hull they are forwarded to central market towns in railway trucks, each of which is capable of holding 230 birds. A small percentage of the more weakly ones die from being trampled on, and these casualties, with the expense of transit and sale attendants, bring up the price to about 3s. 9d., when they are pitched in the market during August and September. The Irish collections are managed on a similar principle. If the goatings are purchased within reasonable distance of Dublin or Dundalk, they are driven to those ports, and if not, they are sent by rail. Liverpool, like Hull, is quite a "board of supply" for English dealers during the season.

Considerable supplies of Ducks are also brought from Holland, and some Turkeys as well; but the Norwich dealers' Duck supplies are mostly gathered in through the hucksters from the small cottagers in the county. Ronens and Aylesburys have not been much used for crossing, and the supplies are generally of the small mixed brown and cinnamon sort, which has subsisted since the Flood. The cottagers do not force their ducklings, but sell them to the dealers, one of whom takes 30,000 a-year, principally in the duck and green pea season. They come to him about 3 lbs. in weight, and after a week in the lean and three in the fat yard, they are turned out in prime condition, and fully 1 lb. gain in flesh.—HENRY H. DIXON (in *Journal of the Royal Agricultural Society of England*).

THE BEE YEAR OF 1867 IN SCOTLAND, AND THE EGYPTIANS.

THERE is no period of the year, perhaps, when there is less interest felt in the bee garden than in the dreary, dismal month of December. Our little favourites have long since ceased their busy labours, their joyful hum but seldom greets the ear, and for the most part they are doomed to a lengthened involuntary repose, a repose not of choice but of constraint. Retired amid the treasured sweets which their providence has stored up for a time of need, and surrounded by that comfort and protection which a considerate bee-master bestows upon them, they are in a position to bid defiance to the raging storm

and withering blast—to the frost and snows of the sternest winter.

At such a time as this it is not unbefitting that we should take a rapid glance on the bygone year, and see what our little favourites have been doing, and how they have fared during its progress.

Few winters passed over more propitiously than that of 1866-7. Such was the nature or character of the weather that not a hive in my apiary suffered in the least from dysentery or internal moisture. The spring of 1867 found them all I could desire, both as to population and stores; and February opened the season with the most cheering prospects. These, however, were soon doomed to be completely blasted. March, April, and May followed each other in mournful succession, testing and trying to the utmost the metal of even the strongest stocks. Breeding was much retarded. Even feeding failed to make up for the deficiency in pollen and other out-door supplies. The consequence was that the population remained almost stationary, the increase of brood being scarcely more than commensurate with the ratio of deaths; and when at last good weather did set in, most of the hives were found to be deficient in strength.

June, however, brought with it some splendid days, and now it was evident that breeding was being carried on at a prodigious rate. The recuperative powers of prolific queens were amazingly manifested. My young Egyptian hives, especially, shot speedily a-head of all others, and on the 16th of June my first Egyptian swarm took its departure. The morning was very unpropitious. Cold and sunless, scarcely a bee had ventured abroad till about eleven o'clock. Straying into the garden by chance, I glanced indifferently around at the dullness which prevailed throughout, but noticing that the sun was to break forth shortly, I sat myself down for a few minutes. Scarcely had the clouds cleared off, and the sun shone out, when my best Egyptian hive, without almost any premonitory symptoms, poured forth its living silvery stream, making the very air resound with those sharp shrill notes so peculiar to these children of the Nile. Fortunately, though the air was cool, the sun was unclouded, and the swarm, after some little manoeuvring, ultimately settled down on a low-growing shrub. Stepping up to the spot, and observing her majesty on the ground underneath, I lost no time in transferring her into the very centre of the swarm. And now, all settled, I could not but admire these pretty little foreigners, as in dense graceful festoons they clattering hung, the whole sparkling in the sun's bright rays like so many thousand gems in silver and gold. What a glorious sight to the amateur apiarian is a natural swarm! its rushing forth on the floor-board like a roaring cataract o'er a precipice! its eccentric evolutions in the air, darkening the sky almost with its immense volume, now sweeping one way, then another, till—

"High poised on buoyant wing, the thoughtful queen
In gaze attentive views the varied scene,
Swift as the falcon's sweep the monarch bends
Her flight abrupt; the following host descends,
Round the fine twig, like cluster'd grapes they close
In thickening wreaths, and court a short repose."—(Evans).

Never did I manipulate a more gentle and non-irascible swarm. How changed their fiery tempers become when separated from their brood and stores! Herr Vogel may be quite right, therefore, when he says that the Egyptian bee-keepers always approach their bees and hive their swarms with their faces unprotected. Certainly I required no such defence.

Thus, then, my first Egyptian swarm. Did I wonder that her apian majesty came forth on so unpropitious a day? I certainly did, but the sequel will show why. Incipient thrones and dominions, in dozens literally, were cropping up around her, and the wonder only is how she could have tolerated such a state of things so long.

Upon the 19th of June, only three days after the first swarm, piping commenced, and early on the morning of the 22nd, knowing that all must now be ready, I induced, as my general custom is, the youthful emigrants to start. On the 25th a third, and again on the 28th a fourth, swarm issued. Thus in twelve days four swarms issued from the parent hive. The number of queens reared in this hive surpassed anything I ever experienced. The young princesses were issuing forth in half-dozens with every after swarm, and in the intervals between I frequently noticed them running out and in at the entry of the hive pursued by bees, and one or two were actually compelled to take wing, and on returning had great difficulty in being allowed admission by the guards. Betwixt living and dead I counted no less than thirty-three matured princesses—

the largest number reared, so far as I know, by any one hive on record. Half-a-dozen of these I had the pleasure of transmitting, along with other specimens of the race, to Sir John Lubbock, President of the Entomological Society of London, who afterwards handed them over to Mr. Smith for the British Museum collection.

But to return. The summer passed away without much honey-stores being collected. In some localities where white clover was abundant several hives did remarkably well, and a considerable quantity of flower honey was secured, but the result was by no means general, and, so far as my own locality was concerned, little good was done till the end of July, when the lime tree blossoms appeared. The lime tree being most profuse in its blossoming this year, and the weather being warm, moist, and sultry, so suitable for the exudation of the nectar, the honey collected from this source was unusually great, and hives, in some instances impoverished before, now groaned under the weight of accumulated stores. Artificial swarms made from the Egyptians so late as the end of July, filled their domiciles at this time in ten and fourteen days. One, containing the whole bees, and weighing 8 lbs., filled an immense hive with comb in an equally short time from the lime trees alone.

By the middle of August, therefore, most hives in the vicinity of rich clover fields, and especially of lime trees, were in a tolerably fair condition; but something more, of course, was in many cases needed. To such apiarians as were within easy reach of heath-clad hills or moors, there still remained the chances of a good heather season. Never did prospects augur more favourably. The heath, though late, was well flowered and very luxuriant; but, alas! day after day adverse weather prevented the bees from collecting anything like the usual quantity of its precious sweets. It was truly vexing to see, as far as the eye could reach on all sides, the hills purpled with the richest of bee-flowers, the heath, embracing myriads on myriads of its little flowery receptacles laden with golden sweets, and yet for the most part doomed to "blush" if not "unseen" at least unvisited by the bees.

"And waste their sweetness on the desert air."

Bad weather, that but too frequent impediment to the welfare of our apiaries in this fickle northern climate, ruled throughout the heather season; hence most of the hives were brought back from the moors with only an average of eight or ten pounds additional weight.

Here again the Egyptians headed "the poll" as to weight, the prodigious numbers composing their colonies enabling them to make the most of every favourable hour, "pouring out and in" on such occasions, to use the language of a visitor, "like clouds of locusts."

On the whole the autumn closed under not over favourable circumstances, and not a few hives had to be fed up for keeping accordingly. This being attended to, and the stocks being generally strong in population, and, moreover, the wintering up to the present time being very favourable, we may reasonably expect to find our apiaries in the ensuing spring everything which we could desire.—J. LOWE, *Edinburgh*.

SILKWORM REARING IN ENGLAND.—No. 3.

SILKWORM rearing is stated to have been introduced into Italy about the tenth century, and it now forms an important branch of industry in Europe. In England little is done in this way, although many successful experiments have been reported at various times by different persons.

The most useful breeds of the mulberry silkworm are the medium-sized; but at the present day there is great difficulty in finding eggs wholly of good quality. The best of the smaller breeds that give fine silk are those from Japan. These are divided into the annual kinds giving yellow, white, or green silk, and those that are called "Trevolini," because producing three crops the same summer. These are all worms of four sleeps. There is a breed having only three sleeps, but not much cultivated.

There are some wild breeds, such as that called Tusseh. Another is called the Arrindy. The silk of the latter is said to be good and durable when spun and made into a coarse kind of cloth. There is a worm, also, which feeds on the leaves of the castor-oil plant; but lately two new ones have been introduced, of which I intend to speak at a future time. I allude to the *Ailanthus* worm, eating the leaves of that tree, and the Yama-

mai, or oak-leaf worm, and the latter more particularly deserves experiment; but it does not appear to me at present that any of these can supplant the old mulberry breeds, and until convincing proofs are established of advantages in rearing any of them, it would be folly to abandon the silkworm which is so famous nearly throughout the world.

I shall now offer short descriptions of the most useful of the mulberry silkworms—viz.:

Common Worms of Four Sleeps, producing white silk.—These may be called the Chinese kind, and the most useful, deserving every attention. It is this sort which is much reared around the cities of Genoa and Novi, or was before the devastation caused by the "atrofia," or silkworm disease. The superiority of the white silk from this breed is well known in the market, it being much sought for. There is another similar kind of worm producing yellow silk, and which has been more generally cultivated; but of late years both have much suffered from the prevailing disease.

Very Large Worms.—Very large worms are cultivated in various districts of Italy, more especially a breed called "Macedonia." The eggs of these worms are larger and heavier than those of the common kinds, and the worms weigh more in proportion, and so do the cocoons. There does not, however, seem to be any particular advantage in rearing these worms rather than the common ones, for they are more troublesome and expensive, being from eight to nine days longer-lived, besides affording silk of a coarser quality.

Worms of only Three Sleeps.—These are much reared in Lombardy. They are smaller than the common worms, and, of course, produce in proportion less silk; but it is very fine. They have advantages entitling them to be more esteemed than they are. They are shorter lived than the common breed by five or six days, consequently their crop is produced sooner, and with less expense and trouble; but the smallness of the cocoons is somewhat disadvantageous, as the reellers will not pay so good a price for them.

Worms reproducing themselves Three Times the same summer.—It is stated by Moretti that these worms are cultivated in India as a particular sort, observing that they are, doubtless, of the same kind as those reared about Naples, where two crops are produced, the third not being obtained because the temperature does not permit. Be this as it may, I have seen three crops produced in Piedmont. I cannot say, however, that the breed was the same, because it was obtained lately from Japan, and therefore may not be that to which Moretti alludes.—LEONARD HARMAN, JUN.

OUR LETTER BOX.

WHICH IS THE HACKLE? (*Stately*).—The hackle is that part of the plumage which grows on the neck and reaches the shoulders, hanging down in front, and forming as it were a mane. The feathers composing it, like those of the saddle, are long and narrow, differing from body feathers, which are round.

WHICH DOREING PULLETS (*Walton*).—Your pullets nine months old ought to lay, but they vary sometimes. Your food is too elaborate and not good enough. The barley does not want boiling; pollard is poor food, and potatoes are unprofitable. Give them good ground oats mixed with water in the morning, scraps or whole corn at midday, and ground oats again in the evening. Let them have, as frequently as may be, large sods of growing grass, with plenty of fresh mould. If you follow this up they will soon lay.

DISTINGUISHING THE SEX OF POULTRY (*Idem*).—The difference between the cock and pullet is plainly perceptible at a few weeks old in either of the breeds you name. The cock chickens show more comb than the hens, and as soon as they begin to feather the hinder plumage of the cock chickens differs in every way from that of the pullets. Mr. Stevens lots and sells birds as they are sent to him. The catalogue is published a week before the sale, and he sells according to the description supplied to him. Cabbages are not good food for fowls; they afford no nourishment, and possess none of the qualities necessary for profitable or satisfactory feeding. The fowls know it; if you give them every sort of green or root food, the cabbage will be the last they eat.

SPANISH HEN FEATHERLESS (*E. F. W.*).—For a hen to have suddenly lost all her feathers is very unusual. You must keep her shut up all day, unless during one unusually sunny and mild, and feed her generously to promote re-feathering.

MAHOGANY BEE HIVES.—In answer to "S. A." we are informed that the price is twelve guineas, including polished oak stand. They may be seen both stocked and unstocked at Mr. A. Young's, Horninglow, Burton-on-Trent, Staffordshire.

VACCINATION (*A Mother*).—There is, we rejoice to say, an Act rendering vaccination compulsory; and we wish, as in Sweden, that a death sentence could be passed upon any one inoculating with the small pox. We have seen the contemptible French work condemning vaccination; but what is that compared to the unanimous testimony of every medical man of celebrity?





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